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To: Cllr David Evans (Chair)

Councillors: Mike Allport, Mel Buckley, David Coggins Cogan, Chris Dolphin, Ian Hodge, Ray Hughes, Richard Lloyd, Mike Peers, Vicky Perfect, Dan Rose and Roy Wakelam

3 January 2024

Dear Sir/Madam

NOTICE OF HYBRID MEETING
ENVIRONMENT & ECONOMY OVERVIEW & SCRUTINY COMMITTEE
TUESDAY, 9TH JANUARY, 2024 at **10.00 AM**

Yours faithfully

Steven Goodrum
Democratic Services Manager

Please note: Attendance at this meeting is either in person in the Lord Barry Jones Council Chamber, Flintshire County Council, County Hall, Mold, Flintshire or on a virtual basis.

The meeting will be live streamed onto the Council's website. The live streaming will stop when any confidential items are considered. A recording of the meeting will also be available, shortly after the meeting at https://flintshire.public-i.tv/core/portal/home

If you have any queries regarding this, please contact a member of the Democratic Services Team on 01352 702345.

A G E N D A

1 **APOLOGIES**

Purpose: To receive any apologies.

2 **DECLARATIONS OF INTEREST (INCLUDING WHIPPING DECLARATIONS)**

Purpose: To receive any Declarations and advise Members accordingly.

3 **FORWARD WORK PROGRAMME AND ACTION TRACKING** (Pages 5 - 14)

Report of Environment and Social Care Overview & Scrutiny Facilitator

Purpose: To consider the Forward Work Programme of the Environment & Economy Overview & Scrutiny Committee and to inform the Committee of progress against actions from previous meetings.

4 **AMBITION NORTH WALES Q2 REPORT** (Pages 15 - 42)

Report of Chief Officer (Planning, Environment and Economy) - Leader of the Council

Purpose: To receive the Q2 performance report from Ambition North Wales.

5 **STREETLIGHTING POLICY** (Pages 43 - 152)

Report of Chief Officer (Streetscene and Transportation) - Deputy Leader of the Council and Cabinet Member for Streetscene and the Regional Transport Strategy

Purpose: To provide an update following the conclusion of the public consultation and present the final draft of the strategy for adoption.

6 **BAILEY HILL MOLD** (Pages 153 - 160)

Report of Chief Officer (Planning, Environment and Economy) - Cabinet Member for Climate Change and Economy

Purpose: To provide an update on the development of the facilities at Bailey Hill in Mold.

LOCAL GOVERNMENT (ACCESS TO INFORMATION) ACT 1985 - TO CONSIDER THE EXCLUSION OF THE PRESS AND PUBLIC

The following item is considered to be exempt by virtue of Paragraph(s) 14 of Part 4 of Schedule 12A of the Local Government Act 1972 (as amended).

The report relates to contract negotiations and the public interest in withholding the information outweighs the public interest in disclosing the information until the contract is complete.

7 **FLEET CONTRACT** (Pages 161 - 208)

Report of Chief Officer (Streetscene and Transportation) - Deputy Leader of the Council and Cabinet Member for Streetscene and the Regional Transport Strategy

Purpose: To provide an update to the Committee.

Please note that there may be a 10 minute adjournment of this meeting if it lasts longer than two hours

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ENVIRONMENT & ECONOMY OVERVIEW & SCRUTINY COMMITTEE

Date of Meeting	Tuesday 9 January 2024
Report Subject	Forward Work Programme and Action Tracking
Report Author	Environment & Economy Overview & Scrutiny Facilitator
Type of Report	Operational

EXECUTIVE SUMMARY

Overview & Scrutiny presents a unique opportunity for Members to determine the Forward Work programme of the Committee of which they are Members. By reviewing and prioritising the Forward Work Programme Members are able to ensure it is Member-led and includes the right issues. A copy of the Forward Work Programme is attached at Appendix 1 for Members' consideration which has been updated following the last meeting.

The Committee is asked to consider, and amend where necessary, the Forward Work Programme for the Environment & Economy Overview & Scrutiny Committee.

The report also shows actions arising from previous meetings of the Environment & Economy Overview & Scrutiny Committee and the progress made in completing them. Any outstanding actions will be continued to be reported to the Committee as shown in Appendix 2.

RECOMMENDATION	
1	That the Committee considers the draft Forward Work Programme and approve/amend as necessary.
2	That the Facilitator, in consultation with the Chair of the Committee be authorised to vary the Forward Work Programme between meetings, as the need arises.
3	That the Committee notes the progress made in completing the outstanding actions.

REPORT DETAILS

1.00	EXPLAINING THE FORWARD WORK PROGRAMME AND ACTION TRACKING
1.01	Items feed into a Committee's Forward Work Programme from a number of sources. Members can suggest topics for review by Overview & Scrutiny Committees, members of the public can suggest topics, items can be referred by the Cabinet for consultation purposes, or by County Council or Chief Officers. Other possible items are identified from the Cabinet Work Programme and the Improvement Plan.
1.02	In identifying topics for future consideration, it is useful for a 'test of significance' to be applied. This can be achieved by asking a range of questions as follows: 1. Will the review contribute to the Council's priorities and/or objectives? 2. Is it an area of major change or risk? 3. Are there issues of concern in performance? 4. Is there new Government guidance of legislation? 5. Is it prompted by the work carried out by Regulators/Internal Audit? 6. Is the issue of public or Member concern?
1.03	In previous meetings, requests for information, reports or actions have been made. These have been summarised as action points. Following a meeting of the Corporate Resources Overview & Scrutiny Committee in July 2018, it was recognised that there was a need to formalise such reporting back to Overview & Scrutiny Committees, as 'Matters Arising' was not an item which can feature on an agenda.
1.04	It was suggested that the 'Action tracking' approach be trialled for the Corporate Resources Overview & Scrutiny Committee. Following a successful trial, it was agreed to extend the approach to all Overview & Scrutiny Committees.
1.05	The Action Tracking details including an update on progress is attached at Appendix 2.

2.00	RESOURCE IMPLICATIONS
2.01	None as a result of this report.

3.00	CONSULTATIONS REQUIRED / CARRIED OUT
3.01	In some cases, action owners have been contacted to provide an update on their actions.

4.00	RISK MANAGEMENT
4.01	None as a result of this report.

5.00	APPENDICES
5.01	Appendix 1 – Draft Forward Work Programme Appendix 2 – Action Tracking for the Environment & Economy OSC.

6.00	LIST OF ACCESSIBLE BACKGROUND DOCUMENTS
6.01	Minutes of previous meetings of the Committee as identified in Appendix 2. **Contact Officer:** Margaret Parry-Jones Overview & Scrutiny Facilitator **Telephone:** 01352 702427 **E-mail:** Margaret.parry-jones@flintshire.gov.uk

7.00	GLOSSARY OF TERMS
7.01	**Improvement Plan:** the document which sets out the annual priorities of the Council. It is a requirement of the Local Government (Wales) Measure 2009 to set Improvement Objectives and publish an Improvement Plan.

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Environment & Economy Overview & Scrutiny Forward Work Programme 2023/24

Date of Meeting	Subject	Purpose of Report/Presentation	Scrutiny Focus	Responsible/Contact Officer	Submission Deadline
6 Feb 24 **10.00 am**	Budget	To consider the final budget proposals	Pre-decision scrutiny	Chief Officer - Streetscene and Transportation	
	Bus Emergency Scheme/Bus Funding	To be confirmed	Assurance	Chief Officer – Streetscene and Transportaiton	
	Car Parking Strategy	To review the current strategy	Pre-decision scrutiny	Chief Officer – Streetscene and Transportation	
5 March 24 **10.00 am**	Enforcement	To receive an update.	Assurance	Chief Officer Streetscene and Transportation	
	Integrated Transport Strategy and Regional Transport Plan	To receive an update	Assurance	Chief Officer – Streetscene and Transportation	
	Outcome of adoption of Local Toilet Strategy	To provide an update following the conclusion of the public consultation and present the final draft of the strategy for adoption.	Assurance	Chief Officer – Streetscene and Transportation	
	Waste Strategy	Progress update	Assurance	Chief Officer – Streetscene and Transportation	

ENVIRONMENT & ECONOMY OVERVIEW & SCRUTINY FORWARD WORK PROGRAMME
APPENDIX 1

Date of Meeting	Subject	Purpose of Report/Presentation	Scrutiny Focus	Responsible/Contact Officer	Submission Deadline
	Highway Inspection Policy	To review the Highway Inspection Policy	Pre-decision	Chief Officer – Streetscene and Transportation	
	Destination Management Plan	To seek support for the draft Destination Management Plan prior to consideration at Cabinet	Pre-decision	Chief officer – Streetscene and Transportation	
11 June 24 10.00 am	Welsh Government Deposit Return Scheme update	As agreed at the meeting on 13th June 2023	Information	Chief Officer - Streetscene & Transportation	
	Active Travel Network Map	To receive an update	Assurance	Chief Officer – Streetscene and Transportation	
	Conversion of the FCC fleet to electric or alternative fuels	To receive a progress report on the implementation of the conversion of the FCC fleet to electric and alternative fuels	Assurance	Chief Officer – Streetscene and Transportation	
	Streetscene Standards	To consider feedback from the Task & Finish Group	Pre-decision	Chief Officer – Streetscene and Transportation	
9 July 24 10.00 am	End of year performance monitoring report	To review the levels of progress in the achievement of activities and performance levels identified in the Council Plan.	Performance Monitoring	Chief Officers	

Items to be added

Bus Services in Flintshire

Fleet Contract Renewal

Destination Management

Place Making Plan Buckley

Place Making Plan Holywell

20 mph Speed Review

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Action tracking for Environment & Economy OSC January 2024

Item/Date	Discussion	Action	By whom	Status
Minutes	Cllr Mike Peers referred to minute 34 - Budget 2024/25 – Stage 2 and asked that the questions and suggestions raised be made available as part of the minutes.	The facilitator to make enquiries with the Democratic Services Manager regarding this.	Facilitator	Ongoing
Council Carbon Footprint Update 2022/23	Cllr Peers asked if the results of the Travel Survey could be shared with the Committee. Cllr Peers also requested a breakdown of renewable energy by percentage – wind and landfill grant, and resource implications.	Information to be requested from Communications Team when available. Information to be provided	Facilitator Ben Turpin	Survey is currently live – ongoing Completed
Workforce Recycling 19 December	Deferred Comments were received from Cllr Peers and Cllr Richardson in advance of consideration of the report at the January meeting.	Link to recording sent to Ruth Tulley for consideration prior to January meeting.	Ruth Tulley	Completed
Contaminated Land Inspection Strategy	Cllr Mike Peers made several comments on the draft relating to accuracy. Sian Jones thanked Cllr Peers for the helpful comments and agreed to update the document.	Draft Strategy to be updated	Sian Jones Rachel Davies	Ongoing
Access Barrier Review	That a review takes place in 6 months following implementation.	Review in 6 months recommended to Cabinet by the Committee	Tom Woodall/ Andrew Farrow	Ongoing

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Environment & Economy Overview & Scrutiny Committee

Date of Meeting	09 January 2024
Report Subject	North Wales Growth Deal – Quarter 2 Performance and Risk Report
Cabinet Member	Cabinet Member for Climate Change and Economy
Report Author	Chief Officer (Planning, Environment & Economy)
Type of Report	Operational

EXECUTIVE SUMMARY

The purpose of the report is to present the Quarter 2 (July to September 2023-24) Growth Deal Performance Report.

Quarterly reporting on progress against the North Wales Growth Deal is a requirement of the Final Deal Agreement. Following consideration by the North Wales Economic Ambition Board, the reports are shared with Welsh Government, UK Government and the local authority Overview and Scrutiny committees.

RECOMMENDATIONS	
1	That the Committee considers and notes the Quarter 2 Performance Report

REPORT DETAILS

1.00	EXPLANING THE NORTH WALES GROWTH DEAL
1.01	In December 2020, the Economic Ambition Board and the Welsh and UK Governments agreed the Final Deal Agreement for the North Wales Growth Deal
1.02	Regular reporting on progress against the North Wales Growth Deal is a requirement of the Final Deal Agreement.
1.03	This report includes oneappendix: ▪ North Wales Growth Deal – Quarter 2 Performance Report ▪

1.04	North Wales Growth Deal – Quarter 2 Performance Report
1.4.1	The Quarter 2 performance report provides an overview of progress on the Growth Deal programmes and projects.
1.4.2	This quarter saw five new projects invited to join the Growth Deal: • Responsible Adventure project by Zip World with a conditional allocation of £6.2m; • Kinmel Studios project by Stage Fifty with a conditional allocation of £6.8m; • Holyhead Hydrogen Hub project by Menter Môn with a conditional allocation of £3.8m; • Deeside Waste to Fuel Plant project by The Circular Economy Ltd with a conditional; • allocation of £6.4m; • Wrexham Gateway project by Wrexham County Borough Council with a conditional allocation of £4.79m Work is ongoing integrating the new projects, site visits have taken place to all 5 projects. These new projects will support our economy, create new jobs and deliver investment into North Wales.
1.4.3	On September 11th the Hydrogen Sponsor Challenge closed for applications. The evaluation process is underway, with a final decision anticipated in December 2023. Up to £11.2million of capital is available to enable industry demand for hydrogen.
1.4.4	The Quarter 2 update is showing projects reporting against the revised portfolio delivery profile approved by the Board. Five projects are currently reporting as red due to either risks to the project scope or significant delays to project timescales: • Connecting the Last Few % - Procurement activity on the project has been suspended until UK Government confirms the launch date for its new intervention, expected to be confirmed in Q3 23/24 for launch in 2024. The UK Government intervention may remove the need for the Last Few % project; • Western Gateway, Wrexham – a review of the project is required to assess its delivery considering the recommendations from the Road Review Panel and Welsh Government's four tests for highways investment; • Former North Wales Hospital, Denbigh – the viability gap on the project has increased and there are ongoing discussions with the development partner on possible solutions; • Glynllifon Rural Economy Hub – planning permission is yet to be secured. The pre-planning response advised that further bat surveys are needed on land outside the Glynllifon boundary. Further survey work is underway as requested by Natural Resources Wales and CADW. • Centre for Environmental Biotechnology – project remains red due to repeated delays. The project is now moving in a

	positive direction with a business case now expected in early 2024.

2.00	RESOURCE IMPLICATIONS
2.01	There are no financial implications arising directly from approving the decision sought in this report.
2.02	The revised delivery and expenditure profile approved by the Board is included in the quarterly report.

3.00	IMPACT ASSESSMENT AND RISK MANAGEMENT
3.01	

4.00	CONSULTATIONS REQUIRED/CARRIED OUT
4.01	

5.00	APPENDICES
5.01	1 North Wales Growth Deal – Quarter 2 Performance Report

6.00	LIST OF ACCESSIBLE BACKGROUND DOCUMENTS
6.01	N/A

7.00	CONTACT OFFICER DETAILS
7.01	**Contact Officer:** Andrew Farrow, Chief Officer, Planning, Environment and Economy **Telephone:** 01352 703201 **E-mail:** Andrew.farrow@flintshre.gov.uk

8.00	GLOSSARY OF TERMS **These are provided corporately on the Infonet (link) and maintained by the Executive Office**
8.01	

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North Wales Growth Deal

2023-24 Quarter 2
(July - September 2023)
Performance Report

Uchelgais Gogledd Cymru
Ambition North Wales

Llywodraeth Cymru
Welsh Government

UK Government
Llywodraeth y DU
Office of the Secretary of State for Wales
Swyddfa Ysgrifennydd Gwladol Cymru

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1. Portfolio Director Summary

During the last quarter, the Economic Ambition Board made a decision to invite five new projects to join the Growth Deal following a call for new projects:

- Responsible Adventure project by Zip World with a conditional allocation of £6.2m
- Kinmel Studios project by Stage Fifty with a conditional allocation of £6.8m
- Holyhead Hydrogen Hub project by Menter Môn with a conditional allocation of
- £3.8m
- Deeside Waste to Fuel Plant project by The Circular Economy Ltd with a conditional
- allocation of £6.4m
- Wrexham Gateway project by Wrexham County Borough Council with a conditional allocation of £4.79m

Work is ongoing onboarding the new projects, site visits have taken place to all 5 projects. These new projects will support our economy to thrive, create new jobs and deliver investment into North Wales.

The closing date for applications for the Hydrogen Sponsor Challenge was on the 11th of September. The process of evaluation and selection is underway, with a final decision anticipated in December. Up to £11.2million of capital is available to enable industry demand for hydrogen. This is a great step forward for the project and we look forward to announcing further detail in due course.

We launched a recruitment campaign in September to fill a number of vacancies with roles including project management, communications and procurement. Further roles will be advertised in October - please visit our website Ambition North Wales | Careers if you are interested in working for Ambition North Wales.

Cllr Dyfrig Siencyn and our Head of Operations Hedd Vaughan-Evans were invited to present to the Senedd's Economy, Trade and Rural Affairs Committee, focussing on the main areas of progress since the last session in March 2021 and the challenges we have faced. This is part of the assurance framework we have in place with both governments and our local partners, and we welcome the opportunity to provide an honest assessment of our progress to date.

It is an exciting time for the North Wales Growth Deal with our new projects onboard and many of our existing projects approaching the point of delivery.

Alwen Williams, Portfolio Director

Alwen Williams

2. Portfolio Performance

Themes	RAG Status	Commentary
Portfolio Business Case		The Portfolio Business Case 2023 update will be presented to the Board for approval in October prior to submission to Welsh Government and UK Government as part of the annual award of funding process.
Delivery Pipeline		The delivery pipeline has been reviewed and updated as part of the 2023 Portfolio Business Case. Projects will now report against this revised timetable
Governance		The Portfolio, Programme and Project Management Framework is now well established with the Portfolio Board and five Programme Boards operating effectively. A Conflicts of Interest procedure is in place across all Boards.
Assurance		The third annual Growth Deal assurance review (Programme Assurance Review) was completed in September 2022 with the report delivering an 'Amber' confidence rating for the portfolio. The next review will has been arranged and will take place during October 2023.
Resource and Capacity		The Portfolio Management Office has been reduced in size by 2 FTE over the past quarter, a recruitment campaign is underway to appoint to vacant posts and to bring in additional capacity. Fixed term contracts in the team have been extended to March 2025 reducing the risk of staff leaving in the short term.
Finance		A total of £2.28m Growth Deal funding had been spent up to the end of 2022/23, £1.8m of that on the Digital Signal Processing Centre. To date in 2023/24 £368k of Growth Deal revenue has been spent.
Investment		Securing the public and private sector investment required to deliver the Growth Deal remains a significant risk across the portfolio and an investment strategy is being developed to support the team to meet the investment targets.
Risk		Portfolio-level risks regarding consents and delay remain high due to project-level issues. Affordability remains a high risk due to ongoing inflation, supply chain issues and construction cost increases. The risk around capacity has reduced slightly due to the extension of fixed term contracts related to Growth Deal delivery but remains high
Benefits Monitoring & Evaluation		The benefits realisation, monitoring and evaluation framework and indicator definitions have been finalised, and are with Welsh Government for review. A system user guide is being developed and the second phase of user training for the reporting system is being planned.
Communication and Engagement		The announcement on the new projects joining the Growth Deal was the main focus. With communications continuing to promote the Hydrogen Sponsor Challenge with up to £11.2 million of capital to deliver a hydrogen hub in the region. Our engagement and reach continued to grow on social media, we achieved over 19k visits to the website.

	Delivering to Plan with no issues to address (no action required)		Delivery slightly behind schedule and/or minor/moderate issues to address (management action in place)		Delivery significantly behind schedule and/or significant issues to address (urgent action required)

3. Digital Programme Performance

Programme Aim	Job Creation Target	GVA Investment Target	Total Investment Target
Deliver the step change in digital connectivity needed to ensure North Wales is able to satisfy user demand, maintain pace with the rest of the UK, unlock the potential of priority sectors and sites and underpin a flourishing innovation ecosystem.	380	£158m	£41.7m

RAG Status	Programme Manager Commentary
	• The DSP Centre has taken delivery of its second phase of Growth Deal funded equipment and has recruited to 14 positions following the investment. The final business justification case to authorise the final phase of funding is due to be developed next quarter with the Centre focussing on delivering the project's spending objectives. • Following recent discussions with UK Government, preparation for the Last Few % project has been suspended as details of a proposed new national intervention have been shared with Ambition North Wales. The proposal has the potential to deliver or improve upon the spending objectives of the planned reginal project and a decision will be made on rescoping the Last Few % project once UK Government has confirmed that the new intervention will be proceeding. • Progress on the Strategic and Outline Business Cases for the Connected Campuses and Connected Key Sites and Corridors projects continues and the required independent Gateway 2 review for the Connected Key Sites and Corridors project has now been scheduled for November ahead of the Economic Ambition Board's consideration of the Outline Business Case.

Mark Pritchard
Lead Member

Rebeccah Lowry
Senior Responsible Owner

Stuart Whitfield
Programme Manager

	Delivering to Plan with no issues to address (no action required)		Delivery slightly behind schedule and/or minor/moderate issues to address (management action in place)		Delivery significantly behind schedule and/or significant issues to address (urgent action required)

3. Digital Programme Performance

Project (Project Sponsor)	Project Stage	Key Milestones (this quarter)	Key Milestones (next quarter)	RAG Status	RAG Rationale
Digital Signal Processing Centre Bangor University	Delivery	• Final item from second year procurement delivered. • Direct job creation has reached 14 (5 permanent staff, 9 fixed term to December 2024).	• Submission of final business justification case for the third tranche of funding to purchase equipment.		• The project is delivering towards achieving spending objectives with steps taken since the approval of the last business justification case to deliver the target on indirect job creation. • The second round of procurement has now been completed.
Connecting the Last Few % Economic Ambition Board	Developing the Full Business Case	• Procurement documents and contract completed. • SPF application in progress. Community broadband engagement is a workstream within the application.	• UK Government to confirm launch date for its new intervention. • Decision on rescoping the project within the programme		• UK Government has proposed a new intervention which is likely to meet or improve upon the Last Few % project's spending objectives. • Procurement activity has been suspended until UK Government confirms the launch date for its project, expected to be confirmed in Q3 23/24 for launch in 2024
Connected Key Sites and Corridors Economic Ambition Board	Developing the Outline Business Case	• Outline Business Cases for 4G+ and Fibre workstreams have been submitted for PMO review. • Market engagement activity has started. • Gateway Review has been scheduled (November 2023) • SPF application in progress, this funding will support local authorities work on developing access agreements and surveying mobile coverage	• PMO approval of OBCs • Gateway 2 Review November • Board approval of finalised OBCs		• Market engagement continues to validate proposals. • Inflation risk to affordability being monitored. • Recent UK Government proposal for new national intervention not considered to pose direct risk at this stage. • SPF funding to progress work on regional access agreements (revenue intervention) together with funding to support surveying of mobile across the region.
Connected Campuses Economic Ambition Board	Developing the Strategic Outline Business Case	• Strategic Outline Case for Advanced Wireless workstream submitted for PMO approval. • Business Justification Case for LPWAN project now being progressed to procurement. • Proposal for project assurance arrangements has approved by WG Assurance Hub • SPF application in progress, this includes funding for connectivity assessments across the region	• LPWAN procurement • PMO review of Outline Business Case • Gateway 2 Review to be scheduled for Advanced Wireless workstream		• Market engagement is validating current proposal but will continue to develop this into OBC. • Inflation risk to affordability being monitored. • Proposal for assurance of the two workstreams has been approved by WG Assurance Hub • SPF funding to to undertake connectivity assessments for SMEs to improve delivery arrangements for the project.

	Delivering to Plan with no issues to address (no action required)		Delivery slightly behind schedule and/or minor/moderate issues to address (management action in place)		Delivery significantly behind schedule and/or significant issues to address (urgent action required)

4. Low Carbon Energy Programme Performance

Programme Aim	Job Creation Target	GVA Investment Target	Total Investment Target
To unlock the economic benefits of transformational low carbon energy projects and position North Wales as a leading UK location for low carbon energy generation, innovation and supply chain investment.	980	£530m	£668.5m

RAG Status	Programme Manager Commentary

Page 25	• **Cydnerth (Morlais):** Morlais turbine developers were successful at the recent 'Contract for Difference' allocation round securing over 20MW of allocation and strengthening the case for the Cydnerth project. Terms of investment are currently being established with OBC on track to be recommended for approval December 2023.
	• **Egni:** Updated OBC on track to be recommended for approval towards the end of Q3 23/24.
	• **Hydrogen Hub & Transport Decarbonisation:** Hydrogen Sponsor Challenge closed early September and applicants are currently being assessed. Project on target to appoint a sponsor by the end of 2023.
	• **Smart Local Energy:** following an unsuccessful procurement process for a fund adviser over the summer, the project is close to re-launching a tender with key changes taking on board feedback from the market.
	• **Trawsfynydd:** Cwmni Egino have drafted a change request for key project changes that reflects their recent Business Proposition and key milestones to FID.
	• New projects: 2 new projects from the project replacement process joined the Low Carbon Energy programme:
	  o Deeside Waste to Fuel: OBC is currently being drafted by the sponsor and will be with the PMO imminently for review
	  o Holyhead Hydrogen Hub: OBC is currently being prepared by the sponsor and will be with the PMO this autumn for review

Cllr Llinos Medi
Lead Member

Dylan Williams
Senior Responsible Owner

Elgan Roberts
Programme Manager

	Delivering to Plan with no issues to address (no action required)		Delivery slightly behind schedule and/or minor/moderate issues to address (management action in place)		Delivery significantly behind schedule and/or significant issues to address (urgent action required)

4. Low Carbon Energy Programme Performance

Project (Project Sponsor)	Project Stage	Key Milestones (this quarter)	Key Milestones (next quarter)	RAG Status	RAG Rationale
Cydnerth (Morlais) Menter Môn	Developing the Outline Business Case	• Developers successful with acquiring more than 20MW of 'Contracts for Difference' for the Morlais site. • Achieved an amber rating following the Gateway 2 Review. • Morlais project nearing completion and has been delivered successfully.	• Recommendations from the Gateway 2 Review to be actioned accordingly. • OBC to be updated and finalised following the PMO review. • WEFO Terms & Conditions to be negotiated to enable further investment. • Prepare OBC for December 2023 approval.		• Resolutions to the issues set out need to be presented before the OBC can be submitted for approval
Hydrogen Hub Economic Ambition Board	Developing the Strategic Outline Business Case	• Three bids have been received in response to the Hydrogen Sponsor Challenge.	• The selection process remains on time and scheduled to be presented to the Economic Ambition Board in December. This remains the target date for a decision regarding the appointment of the sponsor(s).		• Bids received, process running on time
Egni Bangor University	Developing the Outline Business Case	• Work is progressing on the design for the new building. • The OBC remains broadly complete but is being updated as design work continues. • Funding discussions continuing with non-Growth Deal potential funders to understand any requirements and timelines.	• Continue working through the design stages with a gateway sign off due. • Continue working through initial surveys especially around utilities. • Finalise internal governance paper to ensure internal approval to same timeline as external approvals. • Prepare OBC for December 2023 approval		• Uncertainty about the final shape of funding and therefore scope and benefits of project.
Smart Local Energy Economic Ambition Board	Developing the Full Business Case	• Engaged with interested Fund Advisors to understand the reasons for not submitting tenders. • Considered potential changes to fee structure and scope of works to make the tender proposal more attractive to the market.	• Agree the most appropriate changes to the tender proposal and update the tender documents. • Re-launch the tender. • Finalise investment strategy and draft FBC.		• Delay to finalising FBC and launch of Fund due to the failure to appoint a Fund Advisor on the first attempt
Trawsfynydd Cwmni Egino	Developing the Strategic Outline Business Case	• Draft change request to reflect the changes to the proposed project since Cwmni Egnio have developed the initial proposal approved within the Programme Business Case was submitted to the PMO for review.	• Change request will be presented to the Programme Board for endorsement. • Draft OBC for tranche 1 for review.		• Uncertainty on programme delivery timescales until the site selection process is completed by UK Government

Deeside Waste to fuel The Circular Economy Developments	Developing the Outline Business Case	• The project has just been brought into the Growth Deal portfolio and initial conversations with the PMO have now started. • On site inception meeting held with the project partner in September. • Steps agreed for ambitious timeline to be the first energy project to start construction work on site in five months' time.	• Training day in early October with project sponsor to discuss project delivery and share experience and knowledge.. • The OBC is being prepared by PwC at unprecedented pace and a Gateway Review is being planned to keep the project on course for a February 2024 start on site date. • Finalise OBC for November 2023 approval		• Mature project proposal in place, expert advisors onboard, credible investors ready to move.
Holyhead Hydrogen Hub Menter Môn	Developing the Outline Business Case	• The project has just been brought into the Growth Deal portfolio and initial conversations with the PMO have now started. • On site inception meeting held with the project partner in September. • Steps agreed for ambitious timeline to achieve OBC in January/February 2024.	• Training day in early October with project sponsor to discuss project delivery and share experience and knowledge.. • Final decision expected from UK Government regarding the £4.8 million investment, subject to due diligence process alongside value for money and subsidy control assessments. • In parallel, the OBC for Growth Deal funding will be developed with urgency ready for a gateway review in November 2023. • Finalise OBC for December 2023 approval		• Investment decisions required from external investors (EDF and UK Government) which are dependent on others

5. Land and Property Programme Performance

Programme Aim	Job Creation Target	GVA Investment Target	Total Investment Target
To address the shortage of suitable land and properties for business growth and to bring forward sites for housing development. To deliver improvements that stimulate investment in sites and premises in the Port of Holyhead and the wider region. Enables other programmes by ensuring the right land and property infrastructure is available.	2280	£1.29bn	£355.4m

RAG Status	Programme Manager Commentary

Page 28	• **Warren Hall, Broughton –** Welsh Government have appointed a consultant to report on the impact of the Hawarden airfield safety case on the project site and the initial assessments are expected in early October. After an initial assessment on the tests for the future highway investment, Welsh Government are to appoint a consultant to undertake a formal assessment to confirm that initial opinion.
	• **Western Gateway, Wrexham** – The Council is to issue a tender to appoint a consultant to undertake an Access and Movement Study to revisit the evidence of traffic patterns and volumes to assess the project sites capacity to be developed in accordance with the recommendations of the Welsh Government Road Review Panel
	• **Former North Wales Hospital, Denbigh** – Ambition North Wales, Denbighshire County Council and Jones Bros and their consultants Avison Young are discussing the viability issues caused by increasing build costs in the construction industry. Other matters in the project continue to make progress in particular cost estimates have greater accuracy, the initial first draft masterplan has been completed and substantial progress has been made on meeting the outstanding planning conditions and licences required to finalise the planning consent for Phase 1 works to commence.
	• **Holyhead Gateway** – Holyhead Port expansion project Harbour Revision Order was approved in early August. Progress on the project business case has accelerated with the Economic Case being further developed, clarity on the procurement route and the draft Subsidy Support document being prepared.
	• **Parc Bryn Cegin, Bangor** – The tender brief for the appointment of the professional team of consultants has been returned and the responses are currently being reviewed.
	• **New projects:** 2 new projects from the project replacement process joined the Land and Property programme:
	  o **Kinmel Studios** – An initial on boarding meeting has been held with Studio 50 and their consultancy team.
	  o **Wrexham Gateway –** An on site meeting has been held with the Project team and this has been followed up with meetings on project governance and processes and to review the strategic outline case.

5. Land and Property Programme Performance

Cllr Jason McLellan
Lead Member

Andrew Farrow
Senior Responsible Owner

David Mathews
Programme Manager

Project (Project Sponsor)	Project Stage	Key Milestones (this quarter)	Key Milestones (next quarter)	RAG Status	RAG Rationale
Western Gateway, Wrexham Wrexham County Borough Council	Developing the Strategic Outline Business Case	• The Council is to appoint a consultant to undertake an access and movement study to obtain current evidence of traffic numbers and flows. This is to provide up to date information for a traffic assessment to be undertaken to confirm if the project site is capable of delivery in light if the Welsh Governments four tests. • Dwr Cymru have confirmed that their Gresford and Five Ford Waste Water Treatment Plants have some existing capacity to take additional flows and treat discharges into rivers for phosphates which can allow existing consented projects to proceed.	• Completion of the procurement process to appoint the consultant to undertake the Access and Movement Study.		• The project risk rating has changed to red whilst the review of the projects ability to meet the Governments tests for highway investment is undertaken.
Warren Hall, Broughton Welsh Government / Economic Ambition Board	Developing the Strategic Outline Business Case	• Welsh Government, Flintshire County Council and Ambition North Wales agreed that the project is able to proceed in accordance with Welsh Governments four tests for new highway works. Welsh Government to undertake formal assessment. • Welsh Government, Flintshire County Council and Ambition North Wales to meet with consultant to receive initial report on the sites compliance with the airfield safety case.	• Welsh Government consultants to provide their draft report on the impact and mitigation of the airfield safety case on the project site.		• Project risk rating remains at amber as meeting the airfield safety case is still to be fully assessed.

Former North Wales Hospital, Denbighshire Jones Bros (Ruthin) Limited / Denbighshire County Council	Developing the Outline Business Case	• Substantial progress on documentation by project partner. Masterplan of site completed and detailed cost assessments completed. New development appraisal completed. • Project partner to submit documents to Planning Authority on S106 agreement, planning condition compliance and Habitat licences.	• Complete the revision of the outline business case incorporating the Phased Development Scenario and procurement route and submit this for approval process to commence. • Draft subsidy support application with advice from external consultants and submit to Competition and Markets Authority • Outstanding consents are granted by planning authority.		• Project risk rating moved to red due to viability gap increasing. Discussions are ongoing with the development partner as to possible solutions.
Parc Bryn Cegin, Bangor Welsh Government / North Wales Economic Ambition Board	Developing the Outline Business Case	• Welsh Government to appoint consultancy team to design and develop the project. •	• Welsh Government consultancy team to commence project development. •		• Slight delay due to procurement process for consultancy team to be appointed. . Green risk rating retained for the project. •
Holyhead Gateway Stena Line Ports Limited	Developing the Outline Business Case	• The Holyhead Harbour Revision Order was granted consent by Welsh Ministers in August. • Progress made on economic Case, procurement, revised costings, in this quarter. • Subsidy Support draft application being developed prior to issuing Pinsent Masons	• Completing the draft Outline Business Case for the delivery of the port capacity enhancement works • Submit the Subsidy Support application to Competition and Markets Authority. • Stena commence first stage procurement prior to issuing the second stage Invitation to Tender..		• Risk rating retained at amber as negotiations with end user of new port areas is still ongoing. •
Kinmel Studios Stage Fifty	Finalising the Strategic Outline Case	• The project has just been brought into the Growth Deal portfolio and initial conversations with the PMO have now started. • On site inception meeting held with the project partner in September.	• Training day in early October with project sponsor to discuss project delivery and share experience and knowledge.		• Risk rating as green given project application scrutiny and assessments made on its deliverability.

Wrexham Gateway Wrexham County Borough Council	Finalising the Strategic Outline Case	• The project has just been brought into the Growth Deal portfolio and initial conversations with the PMO have now started. • On site inception meeting held with the project partner in September. • This was followed by a meeting to discuss further issues including governance current project progress, actions. • Documentation shared with the project partner.	• Training day in early October with project sponsor to discuss project delivery and share experience and knowledge.. • Establish regular meetings and a programme of work •		• Risk rating as green given project application scrutiny and assessments made on its deliverability. •

	Delivering to Plan with no issues to address (no action required)		Delivery slightly behind schedule and/or minor/moderate issues to address (management action in place)		Delivery significantly behind schedule and/or significant issues to address (urgent action required)

6. Agri-food and Tourism Programme Performance

Programme Aim	Job Creation Target	GVA Investment Target	Total Investment Target
To build a more sustainable, vibrant and resilient foundation economy in the region, optimising opportunities for employment and prosperity through our environment and landscape.	380	£281m	£41.3m

RAG Status	Programme Manager Commentary
	Projects are progressing as expected last quarter with on-going management of risks concerning the team changes for the Glynllifon Rural Economy Hub project and on-boarding of the new project, ZipWorld's Responsible Adventure. Planning issues remain a significant risk for all three projects, with the risks being managed as described below. The Programme Board has been discussing the question of why no agriculture-related projects came forward through the recent call for new projects and is proposing the formation of a Task and Finish group to explore this further with stakeholders.

Cllr Charlie McCoubrey
Lead Member

Sioned Williams
Senior Responsible Owner

Robyn Lovelock
Programme Manager

	Delivering to Plan with no issues to address (no action required)		Delivery slightly behind schedule and/or minor/moderate issues to address (management action in place)		Delivery significantly behind schedule and/or significant issues to address (urgent action required)

6. Agri-food and Tourism Programme Performance

Project (Project Sponsor)	Project Stage	Key Milestones (this quarter)	Key Milestones (next quarter)	RAG Status	RAG Rationale
Glynllifon Rural Economy Hub Grŵp Llandrillo Menai	Developing the Full Business Case	• Survey work on-going as requested by Natural Resource Wales and CADW • New Project Manager recruited and Acting Project Senior Responsible Officer (SRO) confirmed as Martin Jardine, replacing Dr. Paul Bevan • Work with the PMO to confirm a revised timeline for drafting and reviewing the Full Business Case working towards approval in early 2024.	• Continue further survey work • On-site meeting with Ambition North Wales to discuss planning risks and timeline to Full Business Case submission • Further develop the Full Business Case		• Rating remains red due to repeated project delays and as planning permission has yet to be secured
Tourism Talent Network Grŵp Llandrillo Menai	Developing the Outline Business Case	• Outline Business Case (OBC) presented to the Programme Board and approved • Outline Business Case (OBC) presented to the Business Delivery Group and supported • Shared Prosperity Funding received for development of a Tourism Talent Pathway project, supporting further development of this project	• Outline Business Case (OBC) to be presented to the Portfolio Board and Economic Ambition Board in October 2023 • Work with PMO to develop project-specific funding agreement • Preparation of the Outline Business Case for the Sustainable Communities for Learning proposal for Hub element, and submission of planning application		• Working through the detail of spoke procurement has led to a delay of 1-2 months shifting Time risk to Amber.
Responsible Adventure ZipWorld	Developing the Strategic Outline Case	• The project has just been brought into the Growth Deal portfolio and initial conversations with the PMO have now started. • On site inception meeting held with the project partner in September.	• Training day in early October with project sponsor to discuss project delivery and share experience and knowledge.		• Working on confirming scope and timeline as part of SOC update.

	Delivering to Plan with no issues to address (no action required)		Delivery slightly behind schedule and/or minor/moderate issues to address (management action in place)		Delivery significantly behind schedule and/or significant issues to address (urgent action required)

7. Innovation in High Value Manufacturing Programme Performance

Programme Aim	Job Creation Target	GVA Investment Target	Total Investment Target
To consolidate North Wales position as a powerful and innovative high value manufacturing cluster, building on existing specialisms and leading expertise to create a higher value, more diverse economic base that supports the transition to a low carbon economy.	180	£114m	£39.5m

RAG Status	Programme Manager Commentary
	The programme board has been focused on supporting projects to deliver to tight deadlines, managing the risks described below. It has also supported Ambition North Wales to participate in the Rural Wales Local Partnership for Innovation Programme research project being led by Aberystwyth University, in collaboration with both Bangor and Wrexham Universities. The research project explores the meaning of innovation in a rural context, which will support the engagement of Growth Deal projects with rural small and medium enterprises across North Wales.

Cllr Dyfrig Siencyn
Lead Member

Paul Bevan
Senior Responsible Owner

Robyn Lovelock
Programme Manager

	Delivering to Plan with no issues to address (no action required)		Delivery slightly behind schedule and/or minor/moderate issues to address (management action in place)		Delivery significantly behind schedule and/or significant issues to address (urgent action required)

7. Innovation in High Value Manufacturing Programme Performance

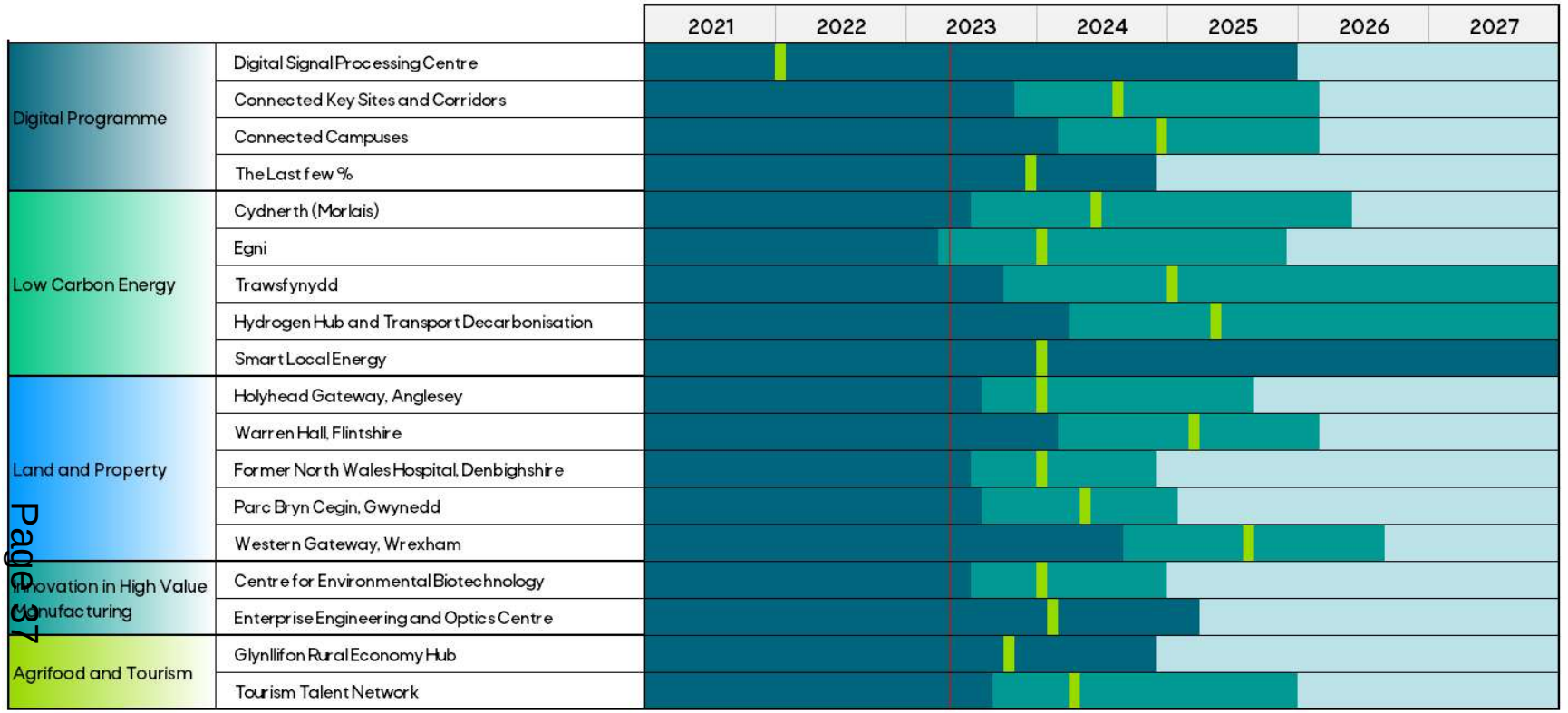
Project (Project Sponsor)	Project Stage	Key Milestones (this quarter)	Key Milestones (next quarter)	RAG Status	RAG Rationale
Enterprise Engineering and Optics Centre Wrexham Glyndŵr University	Developing the Full Business Case	• Designs for the Plas Coch build have been finalised and approved, including detailed room layouts. • Business engagement session in June. • Tenders for the OpTIC works and equipment purchases have been approved and released on Sell2Wales • Apollo Engineering have been appointed as the Hydrogen consultant on the project.	• Finalise drafts of the economic, commercial, financial and management cases for the full business case. • Project on track for Full Business Case consideration by the Economic Ambition Board in November 2023 and start-on-site in February 2024 •		• Main issues around cost and time have been resolved, but timing remains tight to stay on timeline to November approval
Centre for Environmental Biotechnology Bangor University	Developing the Business Justification Case	• Project Assurance Review was carried out 4-6th September securing an Amber rating, indicating work to be done but project deliverable. • Work continues on Henfaes site design - preliminary surveys have been scheduled, conversations held with planning and stakeholder workshop held. • Work on the Business Justification Case has continued based on the PMO review in July.	• Submit application for planning permission for the Henfaes site • Incorporate feedback from Portfolio Management Office Review into finalising the Business Justification Case for final review.		• Rating remains red due to repeated project delays

	Delivering to Plan with no issues to address (no action required)		Delivery slightly behind schedule and/or minor/moderate issues to address (management action in place)		Delivery significantly behind schedule and/or significant issues to address (urgent action required)

8. Project Progress Tracker

Project	Consenting Stage				Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7	Stage 8
	Pre-application stage	Outline planning / Consent	Full planning / Consent	Conditions discharged	Determine the Project context	Preparing the Strategic Outline Case	Preparing the Outline Business Case	Approval of the Outline Business Case	Preparing the Full Business Case	Approval of the Full Business Case	Project implementation and monitoring	Project Evaluation
Digital Signal Processing Centre	No planning required				✓	✓	✓	✓	✓	✓	◷	
Connected Key Sites and Corridors	Consenting requirements TBC				✓	✓	◷					
Connected Campuses	Consenting requirements TBC				✓	✓	◷					
Last Few %	Consenting requirements TBC				✓	✓	✓	✓	◷			
Cydnerth (Morlais)	✓	✓	✓	◷	✓	✓	◷					
Trawsfynydd Power Station	Consenting requirements TBC				✓	◷						
Egni	◷				✓	✓	◷					
Smart Local Energy	Consenting requirements TBC				✓	✓	✓	✓	◷			
Hydrogen Hub & Transport Decarbonisation	Consenting requirements TBC				✓	✓	◷					
Deeside Waste to Fuel	✓	✓	✓		✓	✓	◷					
Holyhead Hydrogen Hub	✓	✓			✓	✓	◷					
Holyhead Gateway	✓	✓	✓	◷	✓	✓	◷					
Former North Wales Hospital	✓	✓	✓	◷	✓	✓	◷					
Western Gateway, Wrexham	LDP adoption outstanding				✓	◷						
Warren Hall, Broughton	◷				✓	◷						
Parc Bryn Cegin, Bangor	◷				✓	✓	◷					
Kinmel Studios	◷				✓	◷						
Wrexham Gateway	◷				✓	◷						
Glynllifon Rural Economy Hub	◷				✓	✓	✓	✓	◷			
Tourism Talent Network	◷				✓	✓	✓	◷				
Responsible Adventure	◷				✓	◷						
Centre for Environmental Biotechnology	◷				✓	✓	◷					
Enterprise Engineering and Optics	✓	✓	✓	◷	✓	✓	✓	✓	◷			

9. Growth Deal Project Delivery Pipeline



	OBC	Start on Site	Project Completion
Digital Signal Processing Centre	Complete	Ion-22	Rhag-25
Connected Key Sites and Corridors	Tach-23	Awst-24	Maw-26
Connected Campuses	Maw-24	Rhag-24	Maw-26
The Last few %	Complete	Rhag-23	Rhag-24
Cydnerth (Morlais)	Gorff-23	Meh-24	Meh-26
Egni	Maw-23	Ion-24	Rhag-25
Trawsfynydd	Hyd-23	Ion-25	Ebr-31
Hydrogen Hub and Transport Decarbonisation	Ebr-24	Mai-25	Mai-30
Smart Local Energy	Complete	Ion-24	Ion-29
Holyhead Gateway, Anglesey	Gorff-23	Ion-24	Medi-25
Warren Hall, Flintshire	Maw-24	Maw-25	Maw-26
Former North Wales Hospital, Denbighshire	Gorff-23	Ion-24	Rhag-24
Parc Bryn Cegin, Gwynedd	Gorff-23	Mai-24	Chwef-25
Western Gateway, Wrexham	Medi-24	Awst-25	Medi-26
Centre for Environmental Biotechnology	Gorff-23	Ion-24	Ion-25
Enterprise Engineering and Optics Centre	Complete	Chwef-24	Ebr-25
Glynllifon Rural Economy Hub	Complete	Hyd-23	Rhag-24
Tourism Talent Network	Medi-23	Ebr-24	Ion-26

The status for each project is assessed against this profile from the 2022 Portfolio Business Case unless a new timeline has been approved by the NWEAB through a project business case or change request. The 2023 Portfolio Business Case will be presented to the NWEAB during October, this includes an updated version of the delivery pipeline.

10. Objective Tracker - Overview of delivery

		Portfolio Business Case 2020 Targets***			Approved Project Business Case Targets				Difference		
		GVA (£M)	Jobs Created (net)	(£M) Total Investment*	OBC/ FBC**	GVA (£M)	Jobs Created (net)	(£M) Total Investment*	GVA (£M)	Jobs Created	(£M) Total Investment*
Digital	Digital Signal Processing Centre (DSP)	50	80	7.3	FBC	12	33	3.0	-38	- 47	- 4.3
	Connecting the last few %	35	150	4.0	OBC	15	130	4.0	-20	-20	0
	Connected Key Sites and Corridors	45	120	9.4	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Connected Campuses	35	0	21	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Low Carbon Energy	Cydnerth (Morlais)	50	100	36	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Hydrogen Hub and Transport Decarbonisation	60	90	28.6	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Egni	20	20	97.7	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Smart Local Energy	120	180	106.2	OBC	122	174	106	+2	-6	0
	Trawsfynydd	230	510	400	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Land and Property	Western Gateway, Wrexham	220	360	43.4	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Warren Hall, Broughton	235	440	70	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Former North Wales Hospital, Denbigh	20	50	74	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Parc Bryn Cegin, Bangor	30	50	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Holyhead Gateway	545	930	80	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Agrifood and Tourism	Glynllifon Rural Economy Hub	25	40	13	OBC	45	96	13	+20	+56	0
	Tourism Talent Network	20	0	12.9	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Innovation in High Value Manufacturing	Enterprise Engineering and Optics Centre	45	70	29.9	OBC	33	61	14.7	-12	-9	-15.2
	Centre for Environmental Biotechnology	60	90	9.6	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Growth Deal Portfolio Total		2,185	3,830	1,146	4OBC + 1 FBC	227	494	140.7	-48	-26	-19.5

* Total investment shown here includes 1.5% Portfolio Management Office costs
** OBC - Outline Business Case, FBC - Full Business Case
*** Targets for removed project still included as part of the total targets for the Growth Deal.
****Following approval of the 2023 Portfolio Business Case the Objective tracker will be updated.

11. Growth Deal Grant Expenditure Profile – Capital Budget 2023/24

Programme	Project	Project Sponsor	2021/22 £m *	2022/23 £m*	2023/24 £m	2024/25 £m	2025/26 £m	2026/27 £m	2027/28 £m	2028/29 £m	2029/30 £m	2030/31 £m	2031/32 £m	2032/33 £m	Total £m
Digital	Digital Signal Processing Centre	Bangor University	0.12	1.66	0.39	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.96
	Connecting the Last Few %	Economic Ambition Board	0.00	0.00	0.60	1.72	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	4.17
	Connected Key Sites and Corridors	Economic Ambition Board	0.00	0.00	0.00	0.50	4.00	2.00	2.37	0.00	0.00	0.00	0.00	0.00	8.87
	Connected Campuses	Economic Ambition Board	0.00	0.00	0.00	3.94	10.10	4.93	1.71	0.00	0.00	0.00	0.00	0.00	20.68
Low Carbon Energy	Cydnerth (Morlais)	Menter Môn	0.00	0.00	0.00	3.33	4.44	1.10	0.00	0.00	0.00	0.00	0.00	0.00	8.87
	Hydrogen Hub & Transport Decarbonisation	Economic Ambition Board	0.00	0.00	0.00	0.00	5.61	5.62	0.00	0.00	0.00	0.00	0.00	0.00	11.23
	Egni	Bangor University	0.00	0.00	0.00	0.00	3.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.94
	Smart Local Energy	Economic Ambition Board	0.00	0.00	0.00	1.50	3.00	9.25	9.25	1.63	0.00	0.00	0.00	0.00	24.63
	Trawsfynydd Power Station	Cwmni Egino	0.00	0.00	0.00	0.00	1.97	2.96	4.92	9.85	5.00	0.00	0.00	0.00	19.70
	Deeside Waste to Fuel**	The Circular Economy	0.00	0.00	0.00	3.20	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.40
	Holyhead Hydrogen Hub**	Menter Môn	0.00	0.00	0.00	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.80
Land and Property	Western Gateway, Wrexham	Economic Ambition Board	0.00	0.00	0.00	0.00	4.48	4.48	0.00	0.00	0.00	0.00	0.00	0.00	8.96
	Warren Hall, Broughton	Economic Ambition Board	0.00	0.00	0.00	0.00	7.38	7.39	0.00	0.00	0.00	0.00	0.00	0.00	14.77
	Former North Wales Hospital, Denbigh	Economic Ambition Board	0.00	0.00	0.74	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.94
	Parc Bryn Cegin, Bangor	Economic Ambition Board	0.00	0.00	0.00	5.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.91
	Holyhead Gateway	Stena line	0.00	0.00	1.40	17.24	15.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34.47
	Kinmel Studios**	Stage Fifty	0.00	0.00	0.00	3.40	3.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.80
	Wrexham Gateway**	Wrexham County Borough	0.00	0.00	0.00	2.79	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.79
Agrifood and Tourism	Glynllifon Rural Economy Hub	Grŵp Llandrillo Menai	0.00	0.00	0.00	7.20	4.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.82
	Tourism Talent Network	Grŵp Llandrillo Menai	0.00	0.00	0.00	0.00	2.13	2.30	0.00	0.00	0.00	0.00	0.00	0.00	4.43
	Responsible Adventure**	Zip World	0.00	0.00	0.10	2.20	3.70	0.20	0.00	0.00	0.00	0.00	0.00	0.00	6.20
Innovation in High Value Manufacturing	Enterprise Engineering and Optics Centre	Glyndwr University	0.00	0.00	1.63	5.41	4.34	0.17	0.00	0.00	0.00	0.00	0.00	0.00	11.55
	Centre for Environmental Biotechnology	Bangor University	0.00	0.00	1.25	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.96
														Portfolio Management Office Costs	5.15
														Total	240.00

** 2021/22 and 2022/23 profile is actual expenditure. Remaining profile is as forecast in the 2023/24 Capital Budget.*

*** Provisional information for new projects included.*

12. Growth Deal Projects: Capital Funding Allocation Profile

Programme	Project	Project Sponsor	Profile 23/24 (£m)	Actual YTD (£m)	Variance (£m)*	Rationale
Digital	Digital Signal Processing Centre	Bangor University	0.39	0.00	-0.39	One claim is due for the DSP project during the year.
	Connecting the Last Few %	North Wales Economic Ambition Board	0.60	0.00	-0.60	
	Connected Key Sites and Corridors	North Wales Economic Ambition Board	0.00	0.00	0.00	
	Connected Campuses	North Wales Economic Ambition Board	0.00	0.00	0.00	
Low Carbon Energy	Cydnerth (Morlais)	Menter Môn	0.00	0.00	0.00	No Full Business Cases have been approved. Expenditure profile now aligned to 2023 Portfolio Business Case update.
	Hydrogen Hub & Transport Decarbonisation	North Wales Economic Ambition Board	0.00	0.00	0.00	
	Egni	Bangor University	0.00	0.00	0.00	
	Smart Local Energy	North Wales Economic Ambition Board	0.00	0.00	0.00	
	Trawsfynydd Power Station	Cwmni Egino	0.00	0.00	0.00	
	Deeside Waste to Fuel	The Circular Economy Development	0.00	0.00	0.00	
	Holyhead Hydrogen Hub	Menter Môn	0.00	0.00	0.00	
Land and Property	Western Gateway, Wrexham	North Wales Economic Ambition Board	0.00	0.00	0.00	No Full Business Cases have been approved. Expenditure profile now aligned to 2023 Portfolio Business Case update.
	Warren Hall, Broughton	North Wales Economic Ambition Board	0.00	0.00	0.00	
	Former North Wales Hospital, Denbigh	North Wales Economic Ambition Board	0.74	0.00	-0.74	
	Parc Bryn Cegin, Bangor	North Wales Economic Ambition Board	0.00	0.00	0.00	
	Holyhead Gateway	Stena line	1.40	0.00	-1.40	
	Kinmel Studios	Stage Fifty	0.00	0.00	0.00	
	Wrexham Gateway	Wrexham County Borough Council	0.00	0.00	0.00	
Agri-food and Tourism	Glynllifon Rural Economy Hub	Grŵp Llandrillo Menai	0.00	0.00	0.00	No Full Business Cases have been approved. Expenditure profile now aligned to 2023 Portfolio Business Case update.
	Tourism Talent Network	Grŵp Llandrillo Menai	0.00	0.00	0.00	
	Responsible Adventure	Zip World	0.00	0.00	0.00	
Innovation in High Value Manufacturing	Enterprise Engineering and Optics Centre	Glyndwr University	1.63	0.00	-1.63	No Full Business Cases have been approved. Expenditure profile now aligned to 2023 Portfolio Business Case update.
	Centre for Environmental Biotechnology	Bangor University	1.25	0.00	-1.25	
		Portfolio Management Office Costs	**1.02**	**0.368**	**1.02**	**0.368**
		Total	**6.18**	**0.368**	**7.13**	**0.368**

* Variance is the difference between the planned profile (Portfolio Business Case 2023) and the Actual Year to Date (YTD) expenditure.

APPENDIX A - Growth Deal Projects Summary

	Project	Sponsor	Summary
Digital	Digital Signal Processing Centre (DSP)	Bangor University	The project will allow the DSP Centre to expand its presence and remit, integrating fully with the National Strategy Project (NSP) and enable the scaling of key assets including a 5G testbed, research capacity and state-of-the-art equipment.
	The last few %	Ambition North Wales	This project targets universal superfast coverage across North Wales, which have yet to be served by other means and cannot obtain speeds of at least 30Mbps (download).
	Connected Key Sites and Corridors	Ambition North Wales	This project aims to enhance the reliability and quality of mobile services on the main roads and rail routes in North Wales, enabling full-fibre services to key commercial sites across the region. Focussing on developing fibreoptic networks, which are essential for delivering 4G, 5G and gigabit capable broadband.
	Connected Campuses	Ambition North Wales	The project will accelerate the development of a range of digital connectivity options with a current focus at 18 key regional economic sites.
Low Carbon Energy	Cydnerth (Morlais)	Menter Môn	Investing in infrastructure to connect to the National Grid network and monitor marine environmental effects. This will enable an increase in the deployment of turbines by tidal developers and the generation of renewable energy.
	Hydrogen Hub and Transport Decarbonisation	Ambition North Wales	Support delivery of a demonstrator project involving the production of green hydrogen from low carbon energy sources and its use within regional transport networks.
	Egni (Low Carbon Energy Centre of Excellence)	Bangor University	Investing in the development of facilities at Bangor University and Menai Science Park, enhancing the North Wales and UK capabilities for innovation in low carbon energy and related areas, helping to create the conditions for new inward investment and business growth in the low carbon energy supply chain in North Wales.
	Smart Local Energy	Ambition North Wales	To help achieve renewable energy, decarbonisation and local ownership targets, the project will support innovative enabling projects and demonstrators that overcome market failures and unlock private and community sector investments in smart local energy solutions.
	Trawsfynydd	Cwmni Egino	The site is uniquely placed for a 'First of A Kind' deployment of a Small Modular Reactor (SMR) or Advanced Modular Reactor (AMR). Alongside the public and private sector, the Growth Deal will contribute funding towards enabling infrastructure for this development.
	Deeside Waste to Fuel	The Circular Economy Ltd	Creation of a facility to convert 182,000 tonnes per year of commercial food waste destined for landfill/incineration into green bio-methane, power, and fertiliser.
	Holyhead Hydrogen Hub	Menter Môn	This project will build a green hydrogen production facility at Parc Cybi, Holyhead, producing around 2000+kg/day of green hydrogen, supplying road, maritime and rail transport customers across North Wales.
Land and Property	Western Gateway, Wrexham	Ambition North Wales	Delivery of primary services to enable the site to be brought to the market for sale and development.
	Warren Hall, Broughton	Ambition North Wales	Delivery of primary services to enable the 65-hectare mixed use site to be bought to the market for sale and then development by the private sector.
	Parc Bryn Cegin, Bangor	Ambition North Wales	Provide industrial floor space to meet known demand for units.
	Former North Wales Hospital, Denbigh	Ambition North Wales	The Growth Deal funding will assist in the delivery of a cleared and remediated site with primary services to bring forward a mixed-use commercial and residential development
	Holyhead Gateway	Stena Line	Future proof the Holyhead Port by providing new deep-water heavy loading and cruise facilities, improved vehicular access, guaranteeing the future of the breakwater and providing for the demands of regional energy projects.
	Wrexham Gateway	Wrexham County Borough Council	This project is a sustainable development of a vibrant regenerated area, creating a focal point to support business investment and a multi-modal transportation hub with links to active travel.
	Kinmel Studios	Stage Fifty	This project will design, build and operate film and television studios at Tir Llwyd Enterprise Park along with a training academy and incubator units.
Agri-food and Tourism	Glynllifon Rural Economy Hub	Grŵp Llandrillo Menai	The vision is to create a distinctive, world-class Rural Economy Hub at Glynllifon, offering a range of facilities and services to strengthen and enhance the regional economy, specifically through growing the food and drink sector.
	Tourism Talent Network	Grŵp Llandrillo Menai	Future-proofing the pipeline of skills provision and increase commercial benefits from one of the most established sectors in the region. The talent network will stimulate public-private collaboration to coordinate action on skills and product development to transform and accelerate the growth of the tourism and hospitality sector in the region.
	Responsible Adventure	Zip World	A multi-element project as part of a sustainable and eco-tourism package including a new sustainable Cable Car, Slate Explorer including visitor viewing platform and an eBus Network.
Innovation in High Value Manufacturin	Centre for Environmental Biotechnology (CEB)	Bangor University	The Centre for Engineering Biotechnology will be a world-leading centre in the discovery and characterisation of novel extremophilic enzymes of industrial relevance. The Centre for Engineering Biotechnology will provide a strong foundation for attracting world-leading researchers, significant public and commercial research funding, and inward investment to Wales.
	Enterprise Engineering & Optics Centre	Wrexham University	The Enterprise Engineering & Optics Centre will provide facilities targeted to boost high-level skills development for the region and enable Small and medium-sized enterprises (SME's) and large businesses to work in partnership with Wrexham Glyndwr University on commercially driven research and development in optics, composites and hydrogen fuel cells.

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ENVIRONMENT AND ECONOMY OVERVIEW AND SCRUTINY

Date of Meeting	Tuesday, 9th January 2024
Report Subject	Street Lighting Policy 2023-2028
Cabinet Member	Deputy Leader of the Council and Cabinet Member for Streetscene and Regional Transport Strategy
Report Author	Chief Officer – Streetscene and Transportation
Type of Report	Strategic

EXECUTIVE SUMMARY

Street lighting provides illumination for various types of highway and public open spaces, assisting road safety and ease of passage for all users in the hours of darkness. Improved visibility reduces the likelihood of traffic collisions and improves road safety. There is no legal requirement on local authorities in the UK to provide street lighting for any highway or proposed highway under its responsibility; however, the Council does have a duty to ensure that lighting units are maintained in a safe condition. Street lighting can enhance the night-time economy and encourage the use of facilities, as well as contributing to the general well-being within communities. It has a wider social role, helping to reduce crime and the fear of crime, and can contribute to commercial and social use of town centres, shopping areas and tourist locations at night-time.

The last time the policy was reviewed was in 2015 when the standards were amended for repairing street lighting faults and the frequency of night-time inspections were revised, as well as including provision for part-night lighting and dimming lights.

The draft policy sets out the responsibilities, requirements and standards for all new or replacement external public highway lighting, and aims to incorporate, wherever practicable, all relevant codes of practice and legislation, together with industry best practice and national policies. The revised policy being presented for consideration with this report takes into account additional electrical infrastructure, such as electric vehicle charging, vehicle activated signs and defibrillators.

RECOMMENDATIONS	
1	That Scrutiny notes the portfolio's performance against the current standards and policy.
2	That Scrutiny supports the revised Street Lighting policy

REPORT DETAILS

1.00	**BACKGROUND TO THE STREET LIGHTING POLICY AND PROVISION OF STREET LIGHTING AND ASSOCIATED ELECTRICAL EQUIPMENT**
1.01	Street lighting provides illumination for various types of highway and public open spaces, assisting road safety and ease of passage for all users in the hours of darkness. Improved visibility reduces the likelihood of traffic collisions and improves road safety. There is no legal requirement on local authorities in the UK to provide street lighting for any highway or proposed highway under its responsibility; however, the Council does have a duty to ensure that lighting units are maintained in a safe condition. Street lighting can enhance the night-time economy and encourage the use of facilities, as well as contributing to the general well-being within communities. It has a wider social role, helping to reduce crime and the fear of crime, and can contribute to commercial and social use of town centres, shopping areas and tourist locations at night-time.
1.02	Under the Highways Act 1980, the Health and Safety at Work Act 1974 and Electricity at Work Regulations 1989, the Council has a duty to maintain its assets in a safe condition. The Council also has a statutory duty to provide traffic signals and certain illuminated traffic signs and bollards as prescribed within the Traffic Signs and General Directions Act 2023. Under the Highways Act 1980, there is no statutory requirement for local authorities to provide public lighting. However, Councils do have the power to provide lighting for any highway or proposed highway for which they are the designated Highway Authority. The Council also has a duty under Section 17 of the Crime and Disorder Act 1998 to exercise its lighting function with regard to its effect on crime and disorder in an area. Section 39 of the Road Traffic Act 1988 also places statutory duties on the Council to promote road safety. The policy also relates to the following pieces of legislation and codes of practice: • Code of Practice for Well-Managed Highway Infrastructure • British Standards 5489-1:2020 • Construction, Design and Management (CDM) Regulations
1.03	The Council currently owns and maintains 112 traffic signal junctions, 21,300 street lighting units, 3,250 illuminated signs and bollards, 122 vehicle activated signs (VAS) along with various other electrical equipment ranging from feeder pillars, car park ticket machines, illuminated warning lights, defibrillator power sources, speed camera supplies, electric vehicle charging point supplies etc. across the county. In addition, the Council maintains the street lighting and associated infrastructure on behalf of the North and Mid-Wales Trunk Road Agency (NMWTRA), which adds an additional 12 traffic signal junctions across north-east Wales (Wrexham, Flintshire and Denbighshire), 2,500 lighting units, 450 illuminated signs and bollards and a number of other electrical assets.

1.04	**Budget, Resources and Asset Management** a) The street lighting and traffic signal budget for 2023-2024 is £296,000 (excluding energy costs). This covers all aspects relating to the maintenance of the electrical and illuminated infrastructure within the adopted highway network. b) The resources required to deliver the current street lighting service is 5 FTE electricians plus a supervisor. This includes 1 FTE that is self-funded by the costs recovered from external work for NMWTRA and Town and Community Councils. c) Approximately 60% of the lighting assets i.e.12,050 columns and 1,820 illuminated signs and bollards, are older than their anticipated 30-year life expectancy and we are seeing significant costs arising from structural inspections with a high failure rate and an increasing 1-yearly re-inspection requirement, which is likely to lead to a high replacement need in the coming years. d) Currently, 673 columns have been identified as requiring immediate and complete replacement or removal along with approx. 220 illuminated signs that require attention in this financial year with replacement costs in the region of £1.79m. These columns are regularly inspected to ensure that their continuing structural integrity are known. At the present time, around 160 columns per year require immediate action or replacement because of their structural integrity identified following the Council's structural testing regime. e) In addition to this and more commonly following the structural testing, which is scored on a six yearly basis chart, we are seeing an increase in one yearly re-visits, which over time will result in a substantial number of columns requiring replacement or action in a future financial year. f) The current estimated costs for known street lighting column replacements not including illuminated signs and bollards is £1.35m. This is likely to increase with time and currently it is estimated that we could see costs rising by £400k per year on top of the current requirement costs. There is no budget allocated or available for the replacement of these columns and there is no funding for capital improvements to the lighting infrastructure. g) There are also 6 traffic signal sites across the county that have been identified as failing in our annual survey, which are being kept operational through regular repairs and maintenance, but are considered beyond design life with spares availability for outdated equipment running extremely low. h) Following this year's maintenance regime of the traffic signal units, a further 8 sites have been identified for future replacement in addition to the 6 sites in the coming year. We will also need to replace all halogen lighting units in the coming 18 months due to new legislation and end of manufacturing of parts. Indicative costs have been obtained from the contractor and vary, as some sites can be upgraded to new replacement light sources while others require a complete signal head and associated parts change.

	i) A cost has been sought to replace the units from halogen to LED; however, the indicative costs for this are prohibitively high. Funding is required for replacement. The sites that have exceeded their life and are failing* are as follows (*please note not failed, but failing): FC 252 – A548 Gronant FC 307 – A541 Chester Road, Mold FC 101 – B5127 The Cross, Buckley FC 300 – B5444 King Street / Earl Street, Mold FC 302 – A5119 The Cross, Mold FC 345 – B5101 Keepers Lodge, Llanfynydd j) These sites have been classified as Priority 1, which require immediate attention and are constantly being attended to either for failures or replacement parts that are now nearly impossible to source. As a result, we are having to use stock from older sites that have replaced in the last few years, but these have been depleted too. There are also a large number of Priority 2 locations which are considered to be “out of age” sites and again, we are struggling to obtain spare parts for this equipment, and they will soon become an issue, requiring immediate attention at point of failure. k) <u>Energy Costs</u> The annual consumption and cost of electricity for street lighting and traffic signal units is currently approximately £950,000k per annum, based on the current rate of pence per kilowatt hour (ppkwhr). The portfolio is currently reporting an in-year budget pressure of around £200k for street lighting due to increased energy costs.
1.05	**Reporting Faulty Lights or Equipment** Faults involving streetlights are usually caused by the failure of the lamp or other electrical component. In a minority of cases, the fault may be due to the failure of the electricity supply, vandalism or accident damage. Any faults which may occur with this equipment are repaired by the Council, utilising the Council’s in-house street lighting service within Streetscene and specialist contractors under contract as and when required. Supply faults are the responsibility of the Network Management Organisation (normally Scottish Power), who is responsible for providing the electricity supply to the column. Street lighting faults are reported directly to the Contact Centre (via 01352 701234). The Contact Centre logs the fault on the Customer Relations Management (CRM) system with the road name, asset number and location within the highway and nature of the fault, which is then passed to the portfolio and logged on the asset management system (Mayrise), which shows the location of all Council owned lights. Town and Community Council lights that are maintained by the Council will also be entered onto the Mayrise software system and highlighted to ensure that the operator is aware of the specific ownership details. Once the fault notifications have been logged onto the Mayrise software system, they are then sent electronically to a tablet device for the electrician to carry out the necessary repairs.

1.06	**Response Times** The policy sets out the current response times, which are also included in the Streetscene Standards. These are as follows: - • *Emergency call outs - Attend site in 2 hours: - damage to underground cable / overhead cable (FCC owned) - exposed cable / metal work reported as live - column door missing - lantern or bowl hanging - column or pole swaying in wind - structurally unsafe column or pole • Urgent fault - 1 working day: - lanterns or brackets turned or misaligned presenting a danger to the public - columns leaning but presenting no clear danger - bollard heads turned or misaligned presenting a danger to the public - miscellaneous faults deemed as a danger to the public • Faults in supply system affecting apparatus - Regional Electricity Company informed within 24 hours • Fault reported to Street Lighting section - 10 working days • Faults found on night-time inspections - 7 consecutive days • Routine (cyclical maintenance) - 90 days Most street lights take their electricity from the mains supply so will fail if there is any loss of power or if there is a problem with the cable. We will report these faults to the electricity company. The performance targets for electricity company responses are defined by OFGEM and are as follows: • Emergency fault repair response - Attend site in 2 hours • High priority fault repair, traffic light controlled - 2 calendar days • High priority fault repair, non-traffic light controlled - Within 10 working days • Multiple unit fault repair - Within 20 working days • Single unit fault repair - Within 25 working days A high priority fault repair is a fault which is considered to be urgent, for example at the site of an accident blackspot, major road junction or an area of public order concerns. The number of reported faults received by the portfolio in recent years is as follows (not including internal and maintenance reported faults): 2020/2021 - 604 2021/2022 - 1021 2022/2023 - 931 The service performance for responding to faults in recent years has been as follows: 2020/2021 – 27.6 days 2021/2022 – 13.4 days 2022/2023 – 7.2 days

	The current standard for mains supply faults is 18 working days (i.e. those not the responsibility of the Council). The Council has recently been successful in obtaining financial compensation from the Network Management Organisation, where they have failed to meet this agreed standard.
1.07	**Inspections, Repairs and Maintenance** Night-time inspections are carried out every 14 days. Items checked include: • Lanterns which are dark or non-operational • Lamps not fully run up or flickering • Lanterns turned or misaligned • Lanterns obscured by foliage • Lantern bowls hanging, missing or suffering major damage • Column doors missing • Brackets misaligned • Columns leaning Routine maintenance is carried out annually. This includes: • Clean all lamps, reflectors and other components affecting optical performance • Examination of superficial damage, corrosion, chipping, flaking or cracking (concrete columns), cable deterioration, reporting condition. • Inspect all electrical items rectifying where necessary. • Check correct operation of photoelectric cell or associated switching device. • Adjust clocks to correct time where photoelectric cells are not fitted. • Non-routine maintenance is carried out as required. Bulk lamp changing of lamps takes place on main routes and in the town centre on a three and four-year cycle. Structural testing and inspection of columns is carried out every one, three and six years. Electrical testing is carried out every six years.
1.08	The Council is responsible for the structural integrity of all its electrical assets on the adopted highway network, including the street lighting columns and the electrical apparatus within them. This extends to all infrastructure which is placed upon, within and over the adopted network. Additionally, the Council is responsible as highway authority (but not always at the Council's cost) for all assets installed to and from these. Such applications and infrastructure to this could be any electrical or illuminated assets, which span across or over any adoptable Council infrastructure regardless of ownership. An example of these maybe festive illuminations or remembrance poppies erected onto street lighting columns. All such installations require formal approval to be erected onto Flintshire County Council's infrastructure along with full compliance with the appropriate specification and legal requirements. Such applications should be made directly to the Operational Area Manager (North and Street Lighting) on the relevant form within the street lighting specifications.

	We are not responsible for and do not maintain lighting or electrical assets on unadopted or private roads.
1.09	Some Town and Community Councils (T&CCs) own and maintain their own footway lighting columns which total approximately 3,000 units. Approximately half of the T&CC's subsequently contract the Council to carry out the necessary repairs and maintenance on their behalf with the remaining Councils contracting the work to private contractors or organisations. All T&CCs must follow the same standards, rules and regulations as the County Council, and they must submit when requested, the relevant information to Streetscene to demonstrate compliance with the Highways Act 1980. There are variations in the way T&CC owned footway lighting is maintained i.e. either via the County Council or through independent contractors. Where the T&CC then contracts the Council to carry out the work, the lighting is maintained to the same standard as Council owned lighting. Whilst details of the lights are being entered onto the Council's inventory, complaints regarding faults are received directly into the Contact Centre and passed to the electricians electronically to carry out the necessary repair work. Once details of the T&CC inventories have been gathered, the lighting units owned by the T&CC's will be managed in exactly the same manner as the County Council's own lighting and fault details will be passed electronically to the electricians. Street lighting is also installed on new housing estates where the roads (or footpaths) are to be adopted by Flintshire County Council. Developers are required to install lighting in accordance with our requirements and are responsible for all maintenance until formal adoption by the local authority takes place. This occurs only after a thorough inspection by the Council's street lighting supervisor or manager.
1.10	**LED conversion / Dimming lights / Part night lighting** Like so many other councils across the country, we took the decision in 2015 to reduce carbon emissions and costs, through a phased introduction of new replacement LED light installation and the Council completed a two-year programme to convert all the county's street lanterns to LED in 2019. We also dim some lights between the hours of 22:00 and 06:00, resulting in energy savings of up to 30%. Many lamps have automatic sensors, which turn them on at dusk and off in the morning when there is sufficient natural light. Other lights are set to turn on and off at specific times depending on location e.g. if road is overshadowed by dense trees or is a known accident hotspot. Many other local authorities have already introduced part night lighting schemes successfully and without adverse effects, which have made significant savings. With rising energy costs and reduced budgets these types of changes to street lighting are becoming more common.

	As part of the MTFS budget solutions for 2023-2024, work is ongoing to deliver further efficiencies either through extending part night lighting or light dimming in line with the policy. Any areas proposed for part night lighting or light dimming will be subjected to a strict risk assessment and consultation would be required with the Police, local ward members and other interested parties. By extending the part-night lighting a financial saving of approximately £12k per 1,000 lanterns will be delivered. This will be achieved by replacing the photocells on the lanterns installed at locations defined within the policy. Rapid technological advancements, particularly in the realm of illumination and control systems, coupled with a growing demand for electrical infrastructure to support various amenities, have necessitated a thorough review of the Street Lighting Policy. By embracing innovation and adopting a forward-thinking approach, the Council can ensure that its street lighting infrastructure remains efficient, sustainable, and well-equipped to meet the needs of the community. Lighting systems are designed to provide consistent levels of light in a road. Turning off every other light is not only likely to create pockets of darkness but also make it harder for the eyes to adjust and see clearly between lights. Modern lamps and lanterns are designed with improved optical control to concentrate the light downwards onto the street rather than permit spillage upwards into the night sky. Any new lights that we install are designed to minimise light pollution in this way and older lights will gradually be replaced with these at the end of their life.
1.11	**Policy Review** The current policy covers all aspects of the service, including adoption, installation and the various maintenance regimes, which are essential for maintaining the system in a safe an efficient state of repair. The review of the Street Lighting Policy and amendments to the specifications for electrical assets have been prompted by a number of changes and advancements in technology, not only in light emitting diodes for illumination and electronics for control systems, but also due to the additional requirement and number of requests for the installation of certain electrical assets within and on adoptable and maintained Council infrastructure, such as vehicle activated signs, defibrillators and electrical vehicle (EV) charging points. Additionally, the recent consultation on the potential for a new national park encompassing large parts of the west of the county and the Clwydian Range will need to be taken into account. The new policy sets out the responsibilities, requirements and standards for all new or replacement external public highway lighting, and aims to incorporate, wherever practicable, all relevant codes of practice and legislation, together with industry best practice and national policies.

2.00	**RESOURCE IMPLICATIONS**
2.01	**Revenue:** The portfolio is currently reporting an in-year budget pressure of £200k for street lighting due to increased energy costs.

	As part of the MTFS budget solutions for 2023-2024, work is ongoing to deliver further efficiencies either through extending part-night lighting or light dimming in line with the policy. By extending the part-night lighting a financial saving of approximately £12k per 1,000 lanterns will be delivered. This will be achieved by replacing the photocells on the lanterns installed at locations defined within the policy. **Capital:** As outlined in Section 1.04, a number of street lighting assets and electrical infrastructure are now at a critical stage and in urgent need of replacement. A bid has been submitted to the Capital Programme Board for 2024-2025 for the most critical assets and will be subject to sufficient budget being available and approval by the Board. **Human Resources:** There are no known implications for additional capacity or for any changes to current workforce practices, structures or roles as part of this policy review.

3.00	**IMPACT ASSESSMENT AND RISK MANAGEMENT**
3.01	A full integrated impact assessment is required and is attached as Appendix 3 to this report, which elected members are advised to read. **Ways of Working (Sustainable Development) Principles Impact**

Long-term	Positive – the revised street lighting policy can help with Council's carbon reduction and reduce light pollution, energy consumption, carbon emissions, and costs, while improving safety, health, and well-being for people and wildlife
Prevention	Positive – prevention of problems by adopting a responsible outdoor lighting policy: sufficient light, glare control, light trespass reduction, sky glow reduction, and energy conservation
Integration	Neutral - integration of sustainable development into all aspects of operations
Collaboration	Neutral – continue to collaborate with other departments, organisations and sectors e.g. Town & Community Councils, developers
Involvement	Neutral - engaging with local communities and stakeholders to understand their needs and preferences for street lighting, and to raise awareness of the benefits of sustainable lighting

Well-being Goals Impact

Prosperous Wales	Positive - The development of street lighting and technology will ensure that infrastructure is innovative and contributes to a low carbon society which recognises the limits of the global environment and therefore uses resources efficiently and proportionately.
Resilient Wales	Positive – Street lighting is an important aspect of urban infrastructure that can affect the safety,

	security, and sustainability of communities. Street lighting can help to promote security and deter crime or reduce the fear of crime by increasing visibility and surveillance. Reducing energy consumption and carbon emissions by switching to more efficient LED lights, dimming lights at off-peak hours, or using renewable energy sources contributes to a resilient Wales. Additionally, street lighting can contribute to a resilient Wales by enhancing road safety and reducing traffic accidents by providing adequate illumination and visibility for all road users.
Healthier Wales	Positive - street lighting can improve the quality of life, health, safety, resilience and sustainability of people and communities by extending the hours of activity and reducing the fear of active travel at night. It can also improve the safety and comfort of road users by reducing the risk of accidents and collisions. However, street lighting can also have negative impacts on the environment, wildlife and human health if not installed efficiently, sensitively or carefully, such as increased light pollution, increased energy consumption and disruption of circadian rhythms and habitats.
More equal Wales	Positive - Street lighting can have various impacts on society, such as road safety, crime prevention, environmental sustainability, and social inclusion. Street lighting can also affect the well-being and quality of life of people, especially those who live in rural or disadvantaged areas. Street lighting can provide a sense of security, comfort, and belonging, as well as enable social and economic activities after dark. Therefore, street lighting can be seen as a way of promoting social justice and equality, by ensuring that everyone has access to the benefits of public lighting, regardless of their location, income, or background.
Cohesive Wales	Positive – Street lighting can help to deter crime and antisocial behaviour by creating a sense of surveillance and community cohesion.
Vibrant Wales	Positive - Street lighting can create liveable spaces that enhance social engagement, public services, and community pride, as well as supporting local economy and social inclusion by facilitating night-time activities, such as shopping, entertainment, or cultural events.
Globally responsible Wales	Positive - how street lighting is designed, operated and maintained can affect how Wales

		contributes to global well-being. Some of the ways that street lighting can contribute to this goal are by using energy-efficient technologies, such as LED lamps, that reduce greenhouse gas emissions and save costs, implementing smart lighting systems, such as dimming, switching off or adjusting the colour of lights, that respond to traffic, weather and ambient light condition, and by minimising light pollution.

The policy also links to the Council's **Well-being Objectives** 2022-2023 in terms of supporting safer communities and limiting the impact of the Council's services on the natural environment and supporting the wider communities of Flintshire to reduce their own carbon footprint.

The provision of street lighting also aims to contribute to the Council's priorities in terms of providing a well-connected, safe and clean local environment and supporting people in need to love as well as they can by creating resilient communities where people feel connected and safe.

4.00	**CONSULTATIONS REQUIRED/CARRIED OUT**
4.01	Deputy Leader of the Council and Cabinet Member for Streetscene and Regional Transport Strategy
4.02	With the Environment & Economy Overview & Scrutiny Committee

5.00	**APPENDICES**
5.01	**Appendix 1 –** Draft Street Lighting Policy **Appendix 2 –** Specifications for Street Lighting **Appendix 3 –** Integrated Impact Assessment

6.00	**LIST OF ACCESSIBLE BACKGROUND DOCUMENTS**
6.01	None

7.00	**CONTACT OFFICER DETAILS**
7.01	**Contact Officer:** Barry Wilkinson, Highway Network Manager **Telephone:** 01352 704656 **E-mail:** barry.wilkinson@flintshire.gov.uk **Contact Officer:** Darell Jones, Operational Manager (North and Street Lighting) **Telephone:** 01352 701290 **E-mail:** darell.jones@flintshire.gov.uk

8.00	**GLOSSARY OF TERMS**

	British Standards 5489-1:2020 – the standards provide recommendations for the general principles of road lighting, including aesthetic, technical, operational and maintenance aspects. It also provides guidance on energy consumption and environmental impacts, and considers the design of lighting for all types of highways, public thoroughfares and pedestrian and cyclists subways and bridges. It also covers the design of lighting for urban centres and public amenity areas, including lighting relating to smart cities **British Standards 7671:2018** (18th edition) – the standards provide recommendations for the general principles of Electrical infrastructure and the current standard used in the UK. It came into effect from 1st January 2019 and is the national standard used for electrical installation and wiring safety across domestic, commercial, and industrial properties. **Code of Practice for Well-Managed Highway Infrastructure**: The UK Road Liaison Group (UKRLG) publish a Code of Practice for Highway Authorities to following respect of highway maintenance (the Code). Whilst this Code does not place a statutory requirement on the Council, it provides Highway Authorities with guidance on highways management arrangements. Adoption of the recommendations within the Code is a matter for each Highway Authority, based on their own legal interpretation, risks, needs and priorities. The code advocates a risk-based approach to highway management, which is followed in the Council's HAMP, which recognises resource availability and prioritises areas in the greatest need, in order to provide the maximum benefit from the available investment. **Institution of Lighting Professionals Guidance Note 22 -** This is the structural inspection requirements for all asset owners who are responsible for lamp posts, traffic posts, traffic signal poles, signs, CCTV, WiFi, floral decorations or similar. The documentation states and highlights the current practices and requirements of structural testing of various structures and their scoring.

Flintshire County Council

Street Lighting and Electrical Infrastructure Policy
November 2023

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10. Festive Illumination and Erections on Infrastructure
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12. New Technologies and Installations

For further information, advice or guidance with regards to this document or Flintshire County Council Street Lighting and associated infrastructure please contact:

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1. Introduction

1.1 This Policy outlines the basic principles and standards applied to the maintenance of Traffic Signals, Traffic Signs, Street Lighting and Illuminated/Electrical Street Furniture within the administrative area of Flintshire County Council, setting out the aims of the authority with respect to maintenance regimes and the procedures put in place to achieve those aims.

1.2 The overall objective is to manage and maintain a safe, effective and efficient network that not only ensures the safety of all road users, pedestrians and cyclists, but also enables those seeking to engage and install non-electrical, electrical and or illumination assets on, across or over the adopted highway network and Council's infrastructure.

The policy will apply to:

a. Flintshire County Council owned and maintained Carriageways, Highway, Footway, Open Spaces, Amenity, Streetscene and Transportation Electrical assets and Illuminated Lighting.

b. Flintshire County Council owned and maintained Illuminated and Electrical Street Furniture and associated equipment including CCTV, pay and display, ticket machines, bus shelters etc.

c. Town and Community Councils owned Lighting maintained by the County Council on their behalf and the relevant aspects of management and monitoring in accordance with the Highways Act 1980.

d. Outside of scope where other stakeholders wish to erect on, across or over the adoptable highway network or Streetscene and Transportation infrastructure.

1.3 The street lighting policies and specifications have been developed to support the aims and objectives of other County Council and stakeholders' strategies and initiatives, such as recognising that street lighting and illuminated street furniture plays a major part in helping to reduce crime, improving driver behaviour, pedestrian visibility distances and promoting a safer community and reducing the fear of crime (Crime and Disorder Act 1998)

1.4 Flintshire County Council's street lighting department will endeavour to improve the environment by investing in equipment with longevity and ease of maintenance, managing and overseeing the installations of new developments and assets to be transferred to the service in line with the policy and specifications, reducing upward wasted light and reducing the carbon footprint of the service.

2. Legislative Powers

2.1 Flintshire County Council is not required by law to provide street lighting in most locations, however, under the highways act 1980, S97 –

"Every local highway authority may provide lighting for the purposes of any highway or proposed highway for which they are or will be the highway authority."

However, Flintshire County Council is required to maintain any street lighting it does provide in a safe condition and for the benefit of the community it serves.

2.2 On 1st April 1967, under the provisions of the Local Government Act 1966, the County Council assumed responsibility for the maintenance and operation of highway lighting throughout the County generally, including the provision of new installations.

2.3 Roadway lighting is falls into one of two categories:

- Group A, columns of a height of 10m and above
- Group B, columns of a height of between 5m and 8m

Standards for both groups are as laid down in the British Standard Code of Practice for Street Lighting and are covered within the Street Lighting and Illumination specification.

2.4 Some Town and Community Councils in Flintshire retained the responsibility for footway lighting only; however, some of these are placed within the highway network but do not exceed the height of 6 metres. Footway lighting is defined as a system of lighting provided for the highway, in which either:

a. No lamp is mounted more than 4m (13ft) above ground level
b. No lamp is mounted more than 6m (20ft) above ground level and there is at least one interval of more than 46m (50yds) between adjacent lamps in the system.

It is noted however, that on certain rural locations this may vary due to the nature and requirement of the target area for illumination and may differ to the above on criteria but based upon historic installations and as such is accepted.

2.5 The North and Mid Wales Trunk Road Agency (NMWTRA) is the highway authority for road lighting on trunk roads and will have its own policies and practices for maintenance of those installations. The maintenance of these installations is carried out by Flintshire County Council on behalf of NMWTRA and also utilises the Flintshire County Council specifications for installations and maintenance on many of its development and maintenance regimes.

2.6 Flintshire County Council as an authority has a statutory duty to provide traffic signals and certain illuminated traffic road signs as described and laid out within the Traffic Signs Regulation and General Directions Act 2023. The policy and specifications cover the duties and aspects relating to these for maintenance and functionality.

2.7 Flintshire County Council has a duty to ensure that all installations on, across, above or over the adoptable highway network and its own infrastructure are fully compliant and as such ensure that all such installations follow the appropriate request and approval process in line with the specifications and British Standards 7671.

3. Main Aims

3.1 Flintshire County Council Street Lighting Team's aims are as follows:

a. To manage our current Street Lighting and illuminated street furniture network in a safe and fit for purpose condition and in accordance with legislation and the highway asset management plan (HAMP).

b. To manage the reaction time to rectify and respond to reported faults

c. To provide the highest quality of service providing excellent value for money.

d. To reduce the carbon footprint and environmental impact of the Council

3.2 The Aims will be achieved by the following: -

a. Ensure that a high proportion of Street Lighting and illuminated Street Furniture is functioning correctly at all times.

b. Ensure that faulty illuminated street furniture is repaired wherever possible within the timescales specified within this policy.

c. Visit all illuminated street furniture on a regular basis in accordance with the timescale specified within this policy to undertake planned preventative maintenance and to verify their structural and electrical condition.

d. Ensure the appropriate quality of light is being provided by replacing all lamps (where applicable) on a regular basis in accordance with the timescale specified within this policy.

e. Develop a risk management strategy to undertake an effective planned renewal programme for the replacement of obsolete and life expired columns utilising the available budgets.

f. Ensure compliance with the various acts and standards such as the British Standards 7671, Electricity at Work Regulations 1989 and Flintshire County Council's specifications are met by periodically tested and inspecting all Illuminated units, electrical assets, street lighting units and rectifying identified defects.

g. Continue to develop further the management information system in order to effectively manage the inventory.

h. The service will endeavour to reduce the carbon footprint of the service in the following ways:

   i. The purchase of low energy lighting units for all replacements
   ii. Installation of new energy saving equipment when necessary
   iii. Installation of dimming equipment in accordance with the policy
   iv. Installation of part night equipment in accordance with the policy
   v. Installation of tried and tested equipment to reduce waste
   vi. Employ appropriate recycling of life expired components
   vii. Carry out timely repairs and maintenance
   viii. Bulk light source change (certain areas) on a four-year cycle
   ix. Employ monitoring and management systems and night time inspections

4. Benefits of a Well Maintained Street Lighting Network

4.1 Lighting makes an important contribution to highway safety for both drivers and pedestrians, and it can enhance the appearance and vitality of the community. The introduction of the 1998 Crime and Disorder Act placed an obligation on Councils to develop and implement safer community strategies.

4.2 The provision of modern highway lighting is one of the ways in which Flintshire County Council can demonstrate its commitment to a safer and more attractive community.

4.3 Analysis of highway lighting schemes indicate that they are a cost effective solution to assisting in reducing night time road traffic accidents.

5. Maintenance and Management

5.1 The Highways Act 1980 defines Highway Authorities as responsible for the road lighting on adopted highways or potentially adopted highways within its administrative area.

5.2 This legislation does not require the provision of road lighting in every location. However, where road lighting is provided, the highway authority has a duty of care with respect to maintaining that lighting in a safe condition.

5.3 Maintenance standards are a matter for the authority to determine. The two possible approaches for maintaining Street lighting are:

a. Planned Preventative Maintenance approach (PPM). This approach involves regularly visiting assets to undertake routine maintenance activities and replace key components (such as the lamp) even if they are still in good working order

b. Reactive Maintenance. This approach involves visiting assets only when they are known to have failed i.e. following notification of a fault

5.4 There are economic consequences with either option, however the Council will adopt the following: -

a. ‘A’ Roads and other roads with a requirement for complex traffic management arrangements to carry out street lighting repair work e.g. dual carriageways - Planned Preventative Maintenance Approach

b. All other locations - Reactive Maintenance Approach

5.5 The policy when replacing life expired equipment and components is to specify well engineered quality products so that the asset’s reliability is improved thus reducing long term maintenance costs.

5.6 Faults will be identified by undertaking night inspections, during other inspections and reports. The frequency of these inspections shall be every 28 days which will cover all illuminated assets owned and maintained by Flintshire County Council during that period of time.

The standard for repairing faults within the control of the Council will be defined into three main groups: -

a. 3 working days for locations assessed as traffic signals, vulnerable, CCTV sensitive, traffic calming, traffic sensitive or (speed) illuminated traffic signs

b. 10 working days for all other locations and faults

c. Units owned by the Council but subjected to mains supply faults (i.e. those not the responsibility of the Council) are governed by OFGEM standards but will be reported to the DNO within 10 working days of inspection

5.7 This information along with reports made directly by members of the public to the street lighting section is entered into the street lighting management information system (Mayrise) and actioned accordingly.

5.8 All installations within Flintshire shall adopt a white light (low energy) approach (where practical) and shall incorporate a dimming arrangement by 30% from 2200 hrs to 0600 hrs each day, less locations assessed to be outside of this for illumination purposes such as key CCTV locations etc. These levels shall be set at 4k colour rendering with a view to potentially lower levels up to a minimum of 3k on certain sites such as SSSI but only after an acceptable design has been taken and agreed with the Operational North and Street lighting Manager.

Exceptions will be in agreement with the Operational Area Manager (North and Street Lighting).

- Known accident sites
- CCTV Sites
- Sites where dimming the lighting results in the lighting level falling below the level specified in the guidance notes for roads of that category between those hours

5.9 Part night installations can be installed at the following:

- Residential estates
- On rural and non-residential ‘A’ roads
- On rural and non-residential strategic routes
- On industrial estates

The lights will be electronically timed to turn off between midnight and 0500 hrs each day, location dependent. A residual lighting level will remain on each road, based on the risk assessment, but will be assessed and agreed by the Operational Area Manager (North and Street Lighting).

A risk assessment will be completed, and the following groups or individuals may be consulted: -

- North Wales Police
- Local ward member
- Town or Community Council
- Internal FCC stakeholders

The service will take a proactive approach to managing the lighting infrastructure, investigating new opportunities for improving the energy efficiency and carbon footprint of the service.

6. Lighting and Electrical Column Replacement

6.1 The backlog of replacements will be monitored through the inspection process shown in 7.1 to ensure the inventory remains in a safe state of repair. Any funds made available will be utilised to carry out replacement work with any assets showing signs of major defect or danger to the public being removed. These shall all be assessed on a site by site basis and with the final approval of the Operational North and Street lighting Manager.

7. Lighting standard and improvements to the inventory

7.1 The Council cannot specify a particular or consistent standard of lighting on any road or footway but will endeavour to meet the illumination requirements as stated within the British Standards. However, on new developments and regeneration schemes the Flintshire County Council Street Lighting Specifications and required standard of lighting shall be adhered to unless prior agreement is made and approved by the Operational Area Manager (North and Street Lighting).

8. Inspection and Testing regimes

8.1 The Council will carry out a robust inspection and testing regime in accordance including the following:

a. Evening driven inspections to identify faults – These will carried out by the Streetscene teams on a rota which ensures that every light is inspected every 28 days.

b. Maintenance visit – These maintenance visits will be carried out every three years by the area electricians. During the visits the electrician will carry out a visual inspection of the components of the light and clean / grease the unit along with any required standards upgrade.

c. Electrical test visit – These maintenance visits will be carried out every six years by the area electricians. The tests will be in accordance with the statutory requirements and the outcome recorded and retained. These are to be logged onto the Mayrise data base system.

d. Structural test – Structural tests will be carried out by specialist contractors. The columns will be identified following the maintenance visit or by a programmed inspection regime of columns which have exceeded their expected life expectancy. These are to be logged onto the Mayrise data base system.

9. Town and Community Council (T&CC) Owned Lighting

9.1 There are variations in the way T&CC owned footway lighting is maintained i.e. either via the County Council or through independent contractors. Where the T&CC requests the Council to carry out the work, the lighting is maintained to same standard as Council owned lighting. The lights will be included on the Council's inventory and complaints regarding faults received directly into the Contact Centre.

9.2 Once an accurate assessment of each individual T&CC lighting network is gathered, the Council would be in a position, if required, to procure energy

on behalf of the T&CC at the lower rate which is available to the Council. This rate will then be offered to the T&CC with a small administrative added.

9.3 Should T&CC's not currently utilising the Council to maintain their lights they can request their energy procurement is made through this arrangements, a full inventory gathering exercise by the councils electricians will be required. The cost of this work will charged at cost to the appropriate T&CC. Once this information is obtained, the Council Contact Centre can also take and pass on fault requests to the appropriate T&CC on their behalf.

9.4 T&CC's can take advantage of the column replacement and adoption scheme in the same way in which developers can. These must meet the relevant criteria as laid down within the specifications and must forward a commuted sum as calculated on a site by site basis by the Operational North and Street Lighting Manager.

9.5 All T&CC's shall forward and maintain a complete list and inventory of all their assets within and on Flintshire County Council infrastructure or on and or over the adoptable highway network. This list will be updated on the Mayrise and shall be forwarded upon request from the Operational North and Street Lighting Manager or when a change is made to the infrastructure of the T&CC's assets.

9.6 Any amendment or change to lighting classification that will affect any Flintshire County Council infrastructure or on and or over the adoptable highway network whether classed as footway lighting or not shall require the agreement and approval of the Operational North and Street Lighting Manager. This does not affect nor require approval for a like for like change as part of normal maintenance operations but will require approval if a change in light source or illumination elliptical output.

9.7 If T&CC's require or wish to remove an asset from their inventory by means of removal or temporary/permanent switch off then a full Risk and Method Statement must be forwarded along with a consultation list and agreement to remove to the Operational North and Street Lighting Manager if this asset was on Flintshire County Council infrastructure, over the adoptable highway network or affects the illumination string where a mixture of ownership of light sources exist.

10. Festive Illumination and Erections on Infrastructure

10.1 Flintshire County Council will manage contractual arrangements for Installations, maintenance and repairs on behalf of the Town and Community Councils if asked and will charge a small administrative amount to cover Officer time. Costs of the contractor and tender process will be bourne by the relevant Town or Community Council with the aim of a reduction in cost due to economy of scale. The actual cost including staff recharges will be passed to the T&CC

10.2 All installations of festive or electrical illumination on Flintshire County Council infrastructure will require prior approval and inspection upon installation from the Operational North and Street Lighting Manager. Any costs incurred from such installations not gaining approval will be recharged to the relevant party. All requests must be submitted in line with the relevant specifications and hold the relevant information on the appropriate documentation.

10.3 Any equipment to be installed at height, on, over or within the adopted highway network or Streetscene and Transportations infrastructure will require prior approval from the Operational North and Street Lighting Manager and with the relevant supporting documentation. Any costs incurred from such installations not gaining approval will be recharged to the relevant party.

11. Adoptions to the Street Lighting and Electrical inventory

11.1 The standard of lighting to be provided at any location will be required to meet the Councils lighting specification and standard before it can be considered for adoption into the Councils network. The promoter will be required to submit their proposals to the Operational North and Street Lighting Manager for approval before commencement of any work and will be subject to a final site inspection prior to adoption.

11.2 In addition and prior to adopting any street lighting and illuminated street furniture into the Councils inventory from any source a 10 year energy and maintenance contribution from the scheme promoter, in the form of a Commuted Sum, will be required. The charge will based on the energy costs plus maintenance costs projected for the 10 year period as calculated by the Operational North and Street Lighting Manager.

11.3 The standard of an asset or electrical item to be provided at any location will be required to meet the Councils lighting and electrical specification and standard before it can be considered for adoption into the Councils network. The promoter will be required to submit their proposals to the Operational North and Street Lighting Manager for approval before commencement of any work and will be subject to a final site inspection prior to adoption.

12. New Technologies and Installations

12.1 All new technologies shall be assessed based upon each individual asset or requirement. These shall be viewed in line with the Street Lighting and Electrical specification criteria and evaluated for approval by the Operational North and Street Lighting Manager. Such equipment but not limited to which fall into this category would be Electric Car Charging points, Vehicle activated signs or similar, defibrillators etc. each asset will be evaluated on a site-by-site basis.

12.2 All new light sources shall conform to the relevant standards and shall be monitored for suitability to install on the adoptable network and infrastructure. Any deviations to this shall be discussed and approved with and by the Operational North and Street Lighting Manager.

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Streetscene and Transportation

Street Lighting, Traffic Signals and External Electrical Infrastructure

Policy, Design and Requirement Specification for:

Street Lighting
Illuminated Signs
Traffic Signals
Electrical and Illuminated Assets
Erection on and over Flintshire County Council Assets

December 2023

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12. Flintshire County Council’s Street Lighting, Illuminated Street Furniture or Items Erected Over the Adopted Network

Design, Guide and Specification

Introduction

This Design, Guide and Specification has been prepared by and for use in the following Councils with minor variations to the documentation as instructed per authority under each authorities instruction:

Conwy County Borough Council
Denbighshire County Council
Flintshire County Council
Gwynedd Council
Isle of Anglesey County Council
Powys County Council
Wrexham County Borough Council

Minor variations or additions to this standard Specification exist in each of the individual Councils and these will be detailed in Appendix 2.

Developers should note that this Design, Guide and Specification applies to all electrical, visual and illuminated equipment and associated parts on all network, highway, open spaces and associated locations and infrastructure including roads on residential developments, industrial estates, car parks and retail parks which are associated to and for the authority in question.

Whilst the specification of equipment to be used on roads for higher vehicular speeds will generally comply with this document, it is recommended that the design of street lighting on roads for higher vehicular speeds should be discussed with the County Street Lighting Engineer before detailed design commences.

The materials suggested for use in the installation on roads, developments, improvements or similar operations in this document are those which contribute to the County's preferred option for its systems and infrastructure for adoption or items in which are maintainable by and at public expense. Developers and installers who wish to utilise alternative designs or materials should liaise with the street lighting engineer to ensure that adoption will not be prejudiced.

The granting of planning permission or building regulations approval does not mean that the Highway Authority will adopt the proposed street lighting, electrical asset or any other similar infrastructure or part thereof, or necessarily that the highways as proposed will be suitable for adoption. It is vital that developers consult with the Highways Development Control Officer **before** submission for planning permission or building regulations approval to ensure that what is proposed will be acceptable for adoption.

The term "developer(s)" has been used throughout this document to identify the person or organisation who should comply with this design guide and specification. Within this document "developer" also includes "designers", "appointed persons" and "contractors".

Part A Design and Adoption

1 General

1.1 General Procedures

1.1.1 The preferred procedure for adoption will be in accordance with the provisions of Section 38/278 of the Highways Act, 1980 and developers are encouraged to enter into a formal agreement with the Highway Authority.

1.1.2 Where works associated with new road construction involve work within an adopted highway which cannot be included in a Section 38 agreement, a further agreement under Section 278 of the Highways Act, 1980 should be obtained. These agreements should be arranged with the appropriate Highway Authority Officer.

1.1.3 Where works associated with construction involve electrical work being undertaken within an area which is maintained by the Highway Authority Street Lighting Section and such work is being carried out by a Section or Department of the Council or any other authority which cannot enter into a Section 38 or 278 agreement and who are not normally involved with the maintenance of such equipment, the works shall be designed, approved and constructed in accordance with this document.

1.1.4 Before commencing a design the developer or representative shall contact the Lighting Authority to determine their requirements for street lighting. If the developer or representative considers that an alternative lighting class is appropriate, it should be referred to in writing to the Lighting Authority whose decision will be final and binding.

2 Design of Lighting Installations

2.1 General

2.1.1 The design of all lighting and electrical installations/proposals shall be undertaken by a competent lighting and electrical designer, as required and appropriate in accordance with the latest edition of the following publications, incorporating any amendments issued and any other or additional documentation as stated following initial dialogue between the Lighting Authority and the developer or representative:

- ❖ British Standard and British Standard European Specifications.
  - Code of Practice for the Design of Road Lighting BS 5489-1:2020
  - Road Lighting (Performance Requirements) BS EN1301-2-2015
  - Requirements for Electrical Installations BS 7671:2018
  - Supply of Materials [various British or European Standards as referred to below]
- ❖ The Institution of Lighting Professionals publications.
  - Code of Practice for Electrical Safety in Highway Electrical Operations, as amended within this Specification
  - Guidance Notes for the Reduction of Light Pollution

- Technical Report No. 12 – Lighting for Pedestrian Crossing
- Technical Report No. 23 – Lighting of Cycle Tracks
- Technical Report No. 25 – Lighting for Traffic Calming Schemes

❖ The Health and Safety at Work Act, 1974

❖ Traffic Signs Regulations and General Directions 2022

❖ The Electricity at Work Regulations

❖ Construction (Design and Management) Regulations 2020

❖ Engineering Recommendations 'ERG39' of the Electricity Association

❖ Automated External Defibrillators (AEDs) (Gov.uk – Department for Education)

2.1.2 After design and before applying for a Section 38/278 agreement, the proposed installation shall be submitted for approval to the street lighting engineer. All scheme designs approval shall be obtained in writing from the lighting authority prior to commencement on site and any such undertaking on site prior to approval and or acceptance will be at the developer or representative risk and will be required to satisfy the Street Lighting Engineer of on site installation compliance prior to any formal adoption. The submission shall comprise:

❖ All information specified in the Lighting Design Brief can be sent electronically to the lighting authority but the authority must be able to have full and uninterrupted access to the application and or the ability to transfer the application to a suitable internal file or device.

The following information will be required for approval:

❖ Location plan

❖ Adoption plan - Lighting design calculations including electronic calculation files, all input data and details of the software package that has been used. (lighting plots alone are not acceptable)

❖ Details of design consideration(s) made or assumed.

❖ Survey pictures for S278 schemes including the lighting layout of existing infrastructure which will affect the location in question and Survey pictures for S38 schemes which adjoin the existing adoptable network along with the relevant calculations as required by the lighting engineer.

❖ Details of all equipment proposed with supporting certification and documentation (if not detailed in this specification)

❖ Details of the proposed power supplies, including cable calculations and schematic drawings (where required)

❖ Column/Feeder Pillar DNO Connections schedule with Northings and Eastings and plotted on the relevant design application. (All to be unmetered)

- ❖ Scheme drawings – with minimum and average Lux ISO contour in DWG and PDF format. These will be based upon the current lantern and optical standard as issued by the lighting authority.

- ❖ Passive safety risk assessment (as per ILP TR30)

- ❖ Details of signing layout including supply connections.

- ❖ CDM details (Designer Risk Assessment, H&S File etc.)

- ❖ Environmental considerations (if required)

Please note that the above will have the following within and included within the application documentation –

- ❖ The dimensioned widths of carriageways, footways, link paths, cycle routes and service margins.

- ❖ The location of street lighting columns and lighting feeder pillars, any existing lighting installations together with the positions of any existing or proposed tree planting which might affect the illumination of the road.

- ❖ Numbered building plots, existing streets/roads and properties, named or numbered.

- ❖ Any proposed traffic calming measures.

- ❖ 2 copies of a completed schedule of equipment as shown in Appendix 1.

- ❖ Where the design information is supplied in the form of a site drawing showing Isolux contours, any minimum point or average values shall relate to each road and not to the site as a whole.

- ❖ Private cable network as required for approval of the street lighting engineer, a copy of the Distribution Network Operator [DNO] drawing showing the mains and private cable layout is required along with the relevant ducting, chambers and associated parts.

2.1.3 When dealing with the limitation of obtrusive light from the proposed lighting installation in accordance with the institution of lighting engineers guidance notes, the street lighting engineer shall be consulted before any design is undertaken if there is doubt as to which Environmental Zone is applicable to the development.

2.1.4 In exceptional circumstances, lanterns provided to illuminate the highway and which, because of limitations of space, or for aesthetic reasons, are fixed to buildings or structures, may be considered for adoption. Adoption will be subject to the securing of a suitable wayleave, the form of which is to be authorised by the street lighting engineer who will also require written confirmation from the designer of the building or structure or an independent structural engineer of the suitability of the building to support the weight of the lantern and bracket.

A copy of an approved wayleave and legal Agreement is required and at sole cost to the relevant developer or representative. No costs for this application or for future undertakings will be borne or held towards the authority and any such costs to carry out or assist in this process shall be recharged to the developer or representative. Such recharges shall be agreed in advance between the developer or representative and the street lighting engineer/authority.

2.1.5 The luminaire maintenance factor used in the design calculations shall be taken from the appropriate table in the BS 5489-1:2020 and shall equate to the cleaning interval and pollution level as advised by the Council's street lighting engineer. The unit flux maintenance factor shall be obtained from the manufacturer of the lamp, light engine or light emitting diode and shall be based on the figure quoted for lumen/output maintenance after 8000 burning hours for lamp sources or an agreed number of hours for light engine or light emitting diode. The Maintenance Factor to be used in the design calculations shall be the product of the luminaire maintenance factor and the lamp, light engine or light emitting diode maintenance factor.

2.1.6 Electricity supplies to lighting columns shall, unless stated and agreed between the developer or its representatives and the street lighting engineer be provided from the DNO mains via a feeder pillar and a private cable/ducting system to each and every column. Early contact should be made with the DNO and street lighting engineer to ascertain and agree the locations of their mains or possible private supplies.

All installations with 2 or more columns within Flintshire County Council shall be supplied from a single supply point or various agreed supply points from the entrance of an adopted network and shall be on opposing cable circuits thus not to create a number of columns in a line with the same circuit supply.

2.1.7 Where it is necessary to provide underground cables and ducting, the proposed locations of the lighting columns shall be agreed with the street lighting engineer prior to any cable design being undertaken. The overall scheme shall be submitted to the street lighting engineer for approval on completion of any underground cabling layout and design.

2.1.8 In designing the street lighting installation, particular attention should be given to the requirements of Section 5 of BS 5489-1:2020 concerning the siting of columns.

2.1.9 If new lighting is to be installed near to a railway line, airport or in any other sensitive location, as defined in Section 12 of BS 5489-1:2020, the appropriate Authority must be consulted at an early stage about possible interference from the lighting. Copies of consultation correspondence must be provided with the submission to the street lighting engineer. All such documentation should include the final requirement and outcome proposal.

2.1.10 The lighting installation for car parks may be considered for adoption although, the car parks themselves, will not be considered for adoption by the Highway Authority unless prior agreement is met. The lighting of such features shall be designed in accordance with Section 10.7 of BS 5489-1:2020 and, in general, lighting within these areas shall involve the use of white light.

2.1.11 Any proposed tree or shrub planting within the highway boundary shall be located no closer than 5 metres from any street light or illuminated traffic sign and no closer than 2 metres from any feeder pillar. Where the developer provides landscaping or planting on land adjacent to the highway the minimum distances stated above should be complied with in order to avoid obstruction of highway electrical equipment.

Any location where columns are required to be installed and a mature tree is currently in-situ and can not be removed and an alternative position for the relocation of the column can not be given then with agreement between the developer, its representatives and the street lighting engineer a future commuted sum for pruning maybe request. The adoption requirements and agreement for this lays solely with the street lighting engineer.

2.1.12 If the development or installation is not adopted within 6 years, the authority reserves the right to review the suitability of all equipment installed and may require it to be upgraded at the developer or it's representative cost. Such applications shall be discussed and agreed between the developer or it's representative and the street lighting engineer.

If an agreement is not reached then the street lighting engineer's opinion, requirements and requests stall be final. If the developer or it's representative do not accept the final requirements and can not supply suitable mitigations to the satisfaction of the street lighting engineer than formal adoption will not take place.

Further and in addition to this, If adoption isn't agreed within 2 years from the date of the approval then a full clean, ballast/driver and photocell change will be required with all associated costs borne by the developer or it's representative. If adoption isn't agreed within 8 years from the date of the approval then a complete lantern and associate parts change, including columns and possibly cable (at the street lighting engineers discretion) will be required with all associated costs borne by the developer or it's representative.

2.1.13 Only when the authority and street lighting engineer is satisfied that all equipment has been installed correctly and to both manufacturer and the authorities specifications with all issues resolved will the street lighting system be accepted and as such considered for adoption.

2.2 Lighting of Estate Roads and Retail Parks

2.2.1 The lighting installation on estate roads in villages or other rural locations shall be designed having regard to the recommendations contained in the document "Lighting in the Countryside – Towards Good Practice" which can be obtained from The Stationery Office.

2.2.2 The lighting installation for the Urban Road Network including industrial estates and retail parks shall generally be designed to meet the requirements of Section 7 of BS 5489-1:2020. Information on the selection of an appropriate lighting class is given in Annex B of BS 5489-1:2020 however, prior to any design being undertaken the developer should discuss the particular requirements for the site under consideration with the street lighting engineer.

2.2.3 The lighting installation for the Estate Road Network shall generally be designed to meet the requirements of Section 9 of BS 5489-1:2020 and a usual mounting height of 5m or 6m with a post top lantern being the norm is expected. Information on the selection of an appropriate lighting class is given in Annex B of BS 5489-1:2020. If there is any doubt as to the standard to be applied having regard to the road's location and anticipated usage, this must be agreed with the Street Lighting Engineer prior to any design being undertaken.

2.2.4 The lighting of conflict areas ie. road junctions, roundabouts and pedestrian crossings shall be designed in accordance with Section 11 of BS 5489-1:2020. Information on the selection of an appropriate lighting class is given in BS 5489-1:2020. However consideration and knowledge requirement of each location will be given from the street lighting engineer and the final classification for this will be based upon the requirements given from the street lighting engineer.

2.2.5 The locations and types of illuminated signs, where required, shall be approved by the street lighting engineer prior to the submission for a Section 38/278 agreement or any other application, upgrade or amendment to the network. The street lighting engineer shall be consulted regardless as to the type of illumination to be used on those signs which are required to be illuminated, see Clause 6.2 with the final approval for this requirement given from the street lighting engineer.

2.2.6 The positions of all columns and illuminated signs and bollards will be shown on the approved plan, however before installation, the exact positions shall be agreed with the street lighting engineer on site. Care shall be taken over the location of the column door to ensure that maintenance operations can be carried out safely and easily. All installations shall be installed with the column door facing the ducting chamber with the ducting and chamber being installed at the rear of the footway unless prior agreement has been sought and agreed between the developer, its representatives and the street lighting engineer.

2.2.7 Columns shall generally be sited at the rear of the footway so as to avoid obstruction to pedestrian movement. In all cases the minimum clearance from the edge of carriageway to the face of the column shall comply with that recommended in Section 5 of BS 5489-1:2020. On residential developments, columns sited in service margins or grassed areas may be erected with a clearance of 800mm. In cases of doubt, the developer should seek clarification from the street lighting engineer and the final agreement and approval is from the authorities street lighting engineer. With such installations no part of the installation shall be installed on private or riparian land without prior agreement and a wayleave in place. This restriction, requirement and installation is for items above and below ground level.

2.3 Lighting of Cycle Routes

2.3.1 All cycle tracks and cycleways shall be illuminated unless prior agreement has been sought and approved by the street lighting engineer. Cycle routes shall be lit in accordance with the Institution of Lighting Professionals Technical Report No. 23 – Lighting of Cycle Tracks and shall have regard to the Environmental Zone in which the route is located. In Environmental Zones E1 and E2, or where after-dark usage is not likely to be high and a suitable alternative route is available which is lit, it is then recommended that the cycle route should be part nighted if low usage is anticipated or noticed. It is further recommended that the lighting of any cycle route should be discussed with the street lighting engineer prior to the design being undertaken to confirm and agree the most suitable form of lighting and visual appearance of the units to be installed.

2.4 Non-Standard Installations

2.4.1 Whilst there is some flexibility to allow choice in the type of materials to be used, the Council must impose some restriction in order that future maintenance costs, including the necessity to stock a multitude of replacement parts, are reduced to a minimum. Notwithstanding this, the Council is prepared to consider schemes which utilise non-standard highway lighting fittings or units where the developer considers that on aesthetic, or other reasonable grounds, a decorative or heritage-style lantern and/or column should be used for example. In all such cases the developer or its representative should make early contact with the street lighting engineer to discuss and agree the proposal. In such applications a commuted sum shall be set and agreed by the street lighting engineer for the additional cost in which these units or installations would reasonably cost over their life span. Upon failure or replacement of these units the authority holds the right to replace such units and installations with standard fittings or common items used within the department. In all and such cases the decision for this will lay with the street lighting engineer.

2.4.2 The Council as standard will require the payment by the developer or its representative of a commuted sum on all adoptable installations, which will be calculated by the street lighting engineer, to cover the maintenance and energy costs of the standard items over a 10 year period, however as per 2.4.1 an increase to this period of time may apply depending upon the proposed items and cost implications as seen by the street lighting engineer. Also refer to New Technologies and Out of Scope Installations within this specification.

3 Procedure Prior to and for Adoption of Street Lighting/Electrical

3.1 It shall be the developer's or it's representatives' responsibility to ensure that prospective purchasers or owners are fully aware of the locations of all street lighting furniture. Any relocation of equipment shall be at the developer's or it's representatives' expense prior to handover and shall be within design parameters or included in a complete re-design of the scheme. Any and all such redesigns will require the confirmation and approval of the street lighting engineer. If approval is not given by the street lighting engineer then adoption will not proceed.

3.2 The developer or it's representative is responsible for all maintenance and energy usage and payments until such time as the installation is formally adopted in accordance with the relevant agreements. The developer or it's representative shall forward confirmation of payments to the street lighting engineer of the energy (MPAN code) and its relevant codes for usage and lantern (UMSUG codes) upon approval of the design. If these are not submitted within 28 days of the approval to the street lighting engineer then approval maybe withdrawn and additional costs incurred to rectify. All such additional costs due to the non compliance to section 3.2 will be recharged back to the developer or it's representative at the street lighting engineers hourly rate.

3.3 For section 278 or similar already/prior adopted location developments, the cost of energy shall be in line with 3.2 with all emergency maintenance/attendance being taken on by the authority once the installations are substantially completed with a recharge of all such activities being invoiced to the developer or it's representative. Such applications and timeframes shall be at the street lighting engineers discretion. All other costs shall be the responsibility of the developer or it's representative and in line with the authorities standards and repair timeframes. If the developer or it's representative do not carry out these obligations in the agreed timeframes then the authority will action and attend as required to resolve the fault or maintenance issue at the developer or it's representative cost. Such attendances shall be at the discretion of the street lighting engineer.

3.4 The developer or it's representative shall be responsible for the mitigation of light intrusion, such as putting up shields if required from the lighting authority or from the residents if agreed between the relevant parties and the street lighting engineer. No shields or such devices shall be erected without the approval of the street lighting engineer and the engineer may wish to request a confirmation design for those locations in which a shield is erected. These designs and costs shall be borne by the developer or it's representative. It is further required that all installations over 3 columns and lanterns the developer or it's representative shall submitted, if request from the street lighting engineer an agreed number of shields for potential future use and installation upon the development or installation. The number of shields requested shall not exceed 1 complete shield arrangement per 8 lanterns.

3.5 The developer or it's representative shall not offer the columns, signs, beacons, bollards or associated parts for inspection by the authority, until such time as they are confident that all works have been completed satisfactorily and to a point in which is agreed for inspections as specified by the authority, in accordance with this document and/or with the street lighting engineer. If such occurrences, aborted inspections, incomplete works or cancelled visits/inspections are met/undertaken by the street lighting engineer then subject to the engineers discretion an aborted visit and appropriate fee maybe applied at a minimum costing of two hours of the engineers time/rate. This cost will be fully invoiced to and paid by the developer or it's representative, failure to comply with this will be seen as a breech of the specification and approval.

3.6 Numbering schemes will be approved on the initial design for construction and installation purposes with the final numbering scheme(s) being provided by the street lighting engineer

on or shortly after final inspection for adoption. The developer or it's representative shall provide road names and postal addresses for each property where infrastructure has been installed so that the maintenance numbers can be specified. The developer or it's representative shall be responsible for fixing the numbers to the lighting columns (and other street lighting equipment) or shall engage with the authority to carry out this task on their behalf with a recharge of costs incurred by the street lighting engineer and authority being recharged to the developer or it's representative. This shall be agreed in writing prior to its undertaking between the relevant parties.

3.7 Prior to adoption of the highway the developer or it's representative must submit the following to the street lighting engineer in respect of the street lighting installation:

- ❖ The original completion and electrical test certificates, which must be submitted as required by BS 7671 within 3 months of the required adoption date. These must be the original construction certification and if required then and also the reinspection certification.

- ❖ When several lighting units with similar particulars are offered for adoption, one test certificate, together with a schedule of test results for each lighting unit may be submitted.

- ❖ A specific layout plan at 1:500 scale showing the position and identifying number of each street lighting unit and the routes and depths of any underground street lighting cable network must be provided. The unit identification numbers must be cross-referenced to the test certificates.

- ❖ The developer or it's representative will remain fully responsible for the public lighting installation, including payment of energy charges and continuing maintenance, until the date of formal adoption.

- ❖ The developer or it's representative shall forward column door or feeder pillar keys depending upon the style and type and shall supply to the authority each style and type which has been installed within the development. A minimum of 1 key for each style and type shall be presented with further keys required at the rate of 1 keys per 10 columns or feeder pillars.

- ❖ The developer or it's representative shall provide the street lighting engineer a health & safety file including the relevant method statements for the application of works and relevant infrastructure installations prior to any on site activities.

3.8 Following receipt of the documents listed in the above paragraph the street lighting engineer will arrange to inspect the installation to ensure that it fully complies with the Specification. Failure on the part of the developer or it's representative to comply with any requirement under clause 7.1 or any of the above and restrictions/requirements within the approval and this documentation may prejudice adoption. The developer or it's representative will then be required to verify the adequacy of the works undertaken entirely at his own expense and to the satisfaction of the street lighting engineer. Any additional or out of scope costs incurred by the street lighting engineer due to such failures or noncompliance will be recharged back to the developer or it's representative at the street lighting engineers hourly rate and at the discretion of the street lighting engineer.

3.9 When the street lighting engineer considers that the installation fully complies with the approved drawings and this specification then the street lighting engineer shall issue a completion certificate. If the installation is covered by a Section 38, Section 278 or similar agreement, then the completion certificate will be sent to the Council Officer responsible for

the agreement, otherwise a copy of the completion certificate will be sent to the developer or it's representative directly. Confirmation of the certificate does not confirm fully adoption of the installation and development but only that of the agreed infrastructure as laid out within the approval documentation and that this can then be placed onto the relevant maintenance regime. All developments must have all aspects of the Streetscene or Highway network works carried out to an acceptable and approved level prior to any part of adoption. Where such variations are in place the discretion for this will lay with the street lighting engineer.

3.10 Prior to the end of the maintenance period and before final adoption agreement the developer or it's representative shall confirm that all assets for adoption in which require inclusion have been placed onto the National Underground Asset Register (NUAR). Adoption will not occur nor take place until such agreement and confirmation has been undertaken and confirm by the developer or it's representative.

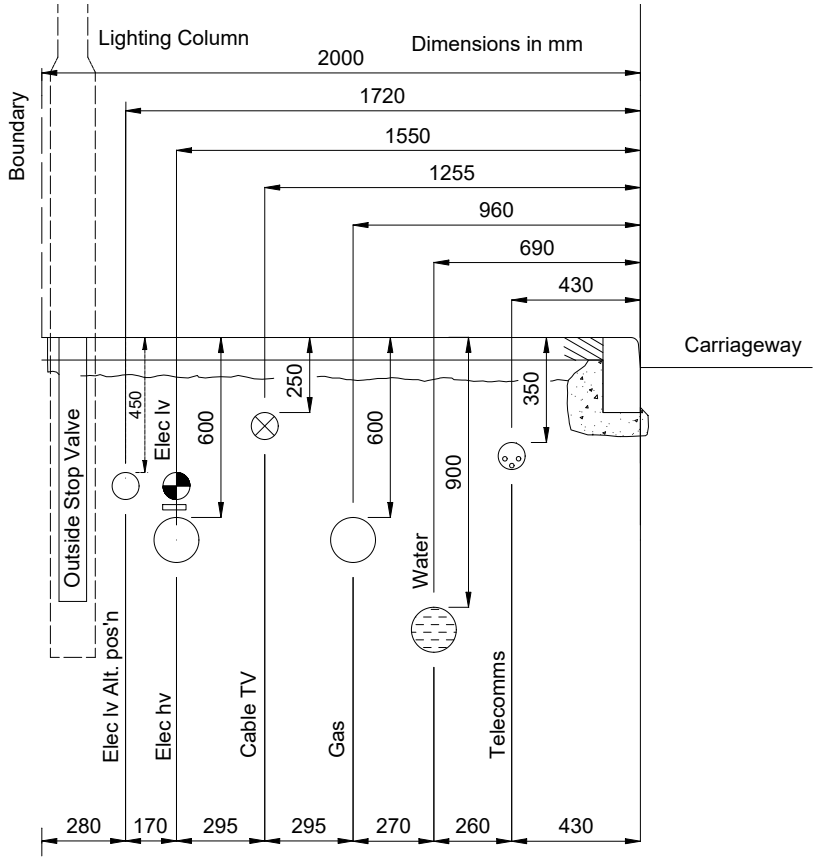
4 Statutory Undertakers and Service Utilities

4.1 Location of Plant/Apparatus

4.1.1 Public utility mains and services shall be laid within the highway boundary but not within the carriageway, unless there is no viable alternative. All items and infrastructure to be adopted and thus maintained by the authority shall be within the adoptable and agreed network or within an area of agreed wayleave as described previously.

4.2 Arrangement of Mains in a 2m Wide Footway

4.2.1 The preferred arrangement of mains in a footway is illustrated below and developers are requested to adhere to this arrangement wherever possible. Any deviation from the below must be approved prior by the street lighting engineer. Failure to gain approval to any such deviations will result in a non compliance to the approval and specifications, and as such may jeopardise adoption.



NOT TO SCALE

The recommended positions shown above result from an analysis of utility needs and the lateral clearances should be considered as a minimum.

The following points should be noted:

- ❖ Industrial estate footway/link path widths may need to be increased to achieve the minimum lateral spacing when larger mains are used.

- ❖ Lighting columns and its relevant infrastructure are to be sited at the rear of the footway as required by BS 5489. It is noted that on new developments and installations it is the developer or it's representative to ensure full compliance to the above preferred arrangements for underground assets.

- ❖ Duct boxes and chambers installed for private systems must be installed at the rear of the footway and in line with the appropriate infrastructure to which they serve.

4.2.2 Where a service margin is to replace a footway, the layout of mains must be agreed with the private street works engineer and street lighting engineer before the completion of a relevant adoption process and agreement.

5 Programme and Inspections

5.1 Programme

5.1.1 In addition to any requirements within the Section 38 Agreement or similar application for the submission of a programme of work for road construction the developer shall advise the street lighting engineer when he intends to install any highway electrical equipment.

5.1.2 The developer or its representative shall forward all relevant information to the acceptance of the street lighting engineer to ensure that a swift and through process of review and understanding is achievable. Failure to forward any reasonable or requested information may delay or even result in the application being refused.

5.2 Inspections

5.2.1 The street lighting engineer shall be advised by the developer or it's representative at least 15 working days in advance of his intention to install highway electrical or electrical carrying equipment including ducting, in particular any installations below ground level, in order to allow the street lighting engineer the opportunity to undertake an inspection of the installation before it is covered.

In the event of the installation not taking part or being undertaken and as such a cancellation of the site inspection, the developer or it's representative shall confirm that the installation will not take place by giving at least 5 working days notice of this directly to the street lighting engineer. Failure to comply with this clause may result in the developer or it's representative having to excavate trial holes at the developer or it's representative expense in order to confirm that the installation fully complies with this Specification and as in previous notations above, a cost maybe borne towards the developer or it's representative.

5.2.2 Where and in agreement between the developer or it's representative and the street lighting engineer attendance is not required or can not be met, photographic evidence of the installation will be required from the developer or it's representative with this is being produced and provided to the street lighting engineer in a clear and appropriate format.

If this photographic evidence is not clear and or does not highlight the requirements as agreed, then this may result in the developer or it's representative having to excavate trial holes at the developer or it's representative expense in order to confirm that the installation fully complies with this Specification and as in previous notations above, a cost maybe borne towards the developer or it's representative. Such requirements and appropriate proof will be at the discretion of the street lighting engineer.

6 Traffic Signs

6.1 General

6.1.1 Where works affect traffic movement on the existing highway network and where it is necessary in the interests of public safety elsewhere, then traffic safety measures for road works shall be implemented in accordance with Chapter 8 of the 'Traffic Signs Manual'. Furthermore, where required applications and approval shall be sought and agreed between the developer or it's representative and the Streetscene streetworks department.

6.2 Permanent Traffic Signs

6.2.1 In all cases, the provision of appropriate traffic signs on new developments will be a requirement for adoption. Any provision must comply with the 'Traffic Signs Regulations and General Directions and be to the satisfaction of the street lighting engineer, who will advise whether signs need to be illuminated or not at the design phase and agreement. Certain locations will be illuminated at the request of the street lighting engineer based upon local requirements and knowledge.

6.2.2 Where traffic signs are required to be illuminated, details of all the installation requirements and the method of providing the electricity supply shall be submitted to the street lighting

engineer for approval. All such posts shall have an aperture of not less than 400mm x 115mm and be fitted with a weatherproof metal door having a vandal-resistant lock with key. The door and housing shall have the same finish as the post, both inside and out.

Wide based posts shall have an access door and cable entry slot. The cable entry slot shall be 75mm wide and 150mm high and shall be 500mm below ground level or to the manufactures guidance. The support posts and fittings shall comply with the requirements for sign posts and shall be fixed directly and securely to the sign stiffening members. All installations shall be in accordance with the manufacturers guidance.

Caps shall be applied to the top of the post to prevent ingress of water where applicable.

One piece light units with integral brackets shall be mounted directly on the sign post and/or on luminaire support posts or as directed by the street lighting engineer with all illuminated traffic signs shall complying with Class RA 2 of BS EN 12899.

Signs which require illuminating shall be mounted on a wide based post of the required and appropriate weight and windage bearing rating with the orientation of sign post doors complying with the correct and approved design.

6.2.3 The developer or it's representative shall consult the street lighting engineer regarding the type of illumination i.e. internal or external, to be used and shall conform the street lighting engineers requirements for such applications and installations.

6.2.4 All sign posts shall conform to BS EN 40, BS12899 and relevant sections within this document.

6.2.5 Caps shall be applied to the top of the post (coloured to match the post) to prevent ingress of water where appropriate and securely fitted.

6.2.6 Posts shall be galvanised steel with two pack glass flake epoxy or bitumen base to the external and internal root to 250mm above ground level, minimum dry film thickness 200µm colour black (shop/manufacture applied).

6.2.7 Passively safe sign posts shall be tubular passively safe signs and shall be provided with a purpose made post cap. Caps shall be applied to the top of the post (coloured to match the post) to prevent ingress of water where appropriate and securely fitted.

Only signposts that have been independently tested by an approved testing organisation and certified to comply with the appropriate class in BS EN 12767 shall be permitted. All such posts will require the approval of the street lighting engineer to suit and match current stock and spares for the authority.

6.2.8 Where signs on passively safe posts require power supply cables for illumination, the cables must be supplied with a pull-out plug or equivalent arrangement in accordance with BS EN 60309 Parts 1 and 2.

6.2.9 Sign plates shall comply with Class RA 2 of BS EN 12899 with all sign plates having a guaranteed on-site life of not less than 25 years. Confirmation of this shall be forwarded to the street lighting engineer prior to adoption. If a lesser life span or guarantee is supplied then either an increase in the commuted sum or agreement between the developer or it's representative and the street lighting engineer will be required.

Such a requirement will be in line with the previous explanations within this documentation and the street lighting engineers opinion being final.

6.2.10 Sign plates shall be made from composite or a pre agreed material between the developer or it's representative and the street lighting engineer. All signs shall be manufactured and erected in accordance with BS EN 12899-1:2022, Traffic Signs Regulations and General Directions 2016, Traffic Signs Manual, Specification for Highway Works, location plan and associated sign schedules and the following/above specification.

6.2.11 The finish shall be Class RA 2 retro-reflective material with a warranted life of not less than ten years and shall fulfil the requirements of BS EN12899-1:2022. If a lesser life span or guarantee is supplied then either an increase in the commuted sum or agreement between the developer or it's representative and the street lighting engineer will be required.

Such a requirement will be in line with the previous explanations within this documentation and the street lighting engineers opinion being final.

6.2.12 Signs shall be stiffened such that post fixings may be positioned at any point across the width of the sign without the need for drilling of the stiffening to permit erection onto posts of unspecified spacing.

Part B
Specification and Requirements

7 Introduction

7.1 The Application of This Specification

7.1.1 This Specification shall apply to carriageway, highway and associated electrical equipment installed on any authority owned infrastructure, road, link path, cycle route, or any element thereof, constructed or installed as part of a residential development, industrial estate, retail park or any area which is intended for adoption by the Council as Highway Authority. Throughout Part B of this document references to 'The Street Lighting Engineer' shall include any other officer designated to act on behalf of the Street Lighting Engineer.

7.2 British Standard and British Standard European Specifications

7.2.1. The current British Standard or British European Standard Specifications shall apply in respect of all materials referred to in this Specification, including their storage and installation. Materials shall, where appropriate, be stamped with a third party verified product certification mark e.g. CE mark, together with the appropriate reference number. All equipment shall also be handled and installed in reference and regards to the manufacturers recommendations or if this specifications exceeds those, as directed by the specification or street lighting engineer.

7.3 Testing

7.3.1 Testing of the electrical and structural installation is deemed to be the responsibility of the developer or it's representative and shall be carried out in accordance with the current, relevant, British Standard or British European Standard Specifications by a competent person. In addition, full compliance to this specification and the street lighting engineer requirements.

7.3.2 Where a British Standard or British European Standard Specification requires that materials are tested to ensure compliance with the relevant specification then an approved independent testing laboratory shall carry out such testing. All such tests will require a

certification which will be passed to the street lighting engineer for confirmation of testing and that of meeting the needs of this specification.

7.4 The Effects of the Works on Existing Highways

7.4.1 Wherever electrical or structural works associated with a new road, link path or cycle route are to be carried out in an existing highway the developer or it's representative shall establish, in advance of the commencement of works, the full requirements of the Highway Authority. It is advisable to undertake this exercise at least 12 weeks in advance of the intended starting date so that, if required, agreements under Section 278 of the Highways Act, 1980 can be prepared otherwise delays may be experienced. Concurrently, the Highways Department can advise on the Highway Authority's requirements in respect of the method of working, traffic control and signing.

7.4.2 The developer's attention is drawn to the need, on his part, to ensure compliance with the requirements of the New Roads and Street Works Act, 1991. Before excavating in any existing highway, developers shall obtain any necessary licence(s) and must establish whether there is any existing statutory undertaker's plant which will be affected. Developers are advised of the need to comply with the requirements contained in the publication "Health and Safety at Work Act – Avoiding Danger to Underground Services" [HS(G)47]. Any apparatus located is to be protected at the developer's expense and no pipe or cable shall be disturbed without the approval of the statutory undertaker. Traffic management, incorporating appropriate safety measures, shall be carried out in accordance with Chapter 8 of the Traffic Signs Manual.

7.4.3 Highways in the vicinity of the works shall be kept free from mud, dust and debris as far as is reasonably practicable. Where contamination of a highway is unavoidable, appropriate signage and regular cleaning will be required. Such applications will be monitored by the street lighting engineer and if appropriate signage and regular cleaning is not undertaken and following dialogue and requests to the developer or it's representative are made and not either applied or undertaken by the developer or it's representative as directed by the street lighting engineer then such applications will be actioned by the street lighting engineer with all reasonable costs recharged back to the developer or it's representative.

Failure to either comply or reimburse following the requests or undertaking of the street lighting engineers actions may result in further actions or cancelation of the approval and installations.

7.4.4 Noise and vibration caused by the works shall be minimised by the best practicable means. It shall be the developer or it's representative responsibility to ascertain and ensure compliance with any specific requirements in this regard.

7.4.5 Existing public highways shall not be used for the stockpiling and storage of materials and plant unless prior written agreement is sought and given by the street lighting engineer.

7.4.6 Blasting operations will not normally be permitted where they will have an effect on an existing adopted highway but where the developer or it's representative has no practicable alternative to the employment of such techniques, the prior approval of the Highway Authority must be obtained through the Private Street Works Engineer. Adherence to any, and all, requirements imposed shall be strictly observed. The developer or it's representative will remain entirely responsible for ensuring compliance with all statutory requirements in respect of blasting operations.

7.4.7 In the event of default on the part of the developer or it's representative in respect of any of the foregoing sub-sections, or any damage caused to an existing adopted highway, the

developer or it's representative shall be entirely responsible for the costs of rectifying the results of such default or damage and for meeting the costs of any claims which may result from the default, damage or rectification and/or repair.

7.4.8 The developer or it's representative shall hold public liability insurance cover to a minimum of £10,000,000 in respect of any one third party claim. Where work is to be carried out in a highway maintainable at the public expense, the Private Street Works Engineer may require a copy of the developer's safety policy and insurance certificate.

7.5 Non-compliance with the Specification

7.5.1 If the developer or it's representative fails to comply with **any** requirement of this specification, adoption of the works will be prejudiced unless and until the non-compliance is rectified to the satisfaction of the street lighting engineer.

7.5.2 Where the developer has entered into a Section 38 agreement or similar, non-compliance may result in the default procedures being invoked.

8. Street Lighting Specification

8.1 General

8.1.1 All materials and workmanship shall be in accordance with this specification and to the satisfaction of the street lighting engineer.

8.1.2 The installer of the electrical and lighting installation must be NICEIC or ECA registered, be experienced in the installation of public lighting equipment and qualified to provide official completion and test certificates. It is further required that HER's accreditation is required for all applications and undertakings on, over or for any proposed adoptable installation or infrastructure.

Where such applications and accreditations are not available for certain and specific undertakings such as structural testing, ducting installation etc proof of competence, qualifications and accreditation to a relevant awarding bodies will be required and at the discretion of the street lighting engineers requirements. As such, the street lighting engineer will require a full method statement and if not satisfied with the application and material supplied the street lighting engineer has the authority to reject and deny applications and works.

8.1.3 Where works are carried out to an adopted lighting installation e.g. as part of works under a Section 278 agreement, any new lighting units installed must be brought into use before the disconnection and removal of any existing lighting units. Where this is not practicable the developer or it's representative shall arrange for some form of temporary lighting to be installed in order to maintain the existing lighting levels unless prior agreement has been sought and agreed between the developer or it's representative and the street lighting engineer.

Any such breech of this shall be at the developer or it's representative cost to rectify. The street lighting engineer shall give appropriate notice to carry out the relevant action as directed by the street lighting engineer. If the appropriate action is not met to the satisfaction of the street lighting engineer by the developer or it's representative then the street lighting engineer shall arrange and recharge all reasonable costs back to the developer or it's representative following rectification of the issue.

8.2 Lighting Columns and Brackets and Traffic Sign Posts for Illuminated Signs

8.2.1 Columns and brackets shall:

- Comply with all relevant parts of BS 5489-1:2020 and BS EN 40 and the particular requirements of this specification.

- Only be purchased from manufacturer's who are registered with either BSI Quality Assurance or Lloyds Register Quality Assurance Ltd., for the manufacture, supply and verification of lighting columns and bracket arms under their Quality Management Schemes (QAS5020/304, QSS 5020) to BS EN IS 9002. Certificates of Conformity may be required in support of all columns used.

8.2.2 All columns and brackets shall carry a unique identification mark which indicates the name of the manufacturer, year of production and manufacturer's batch number. The identification mark shall be permanent, legible and clearly visible and shall be located within the base compartment of the column.

8.2.3 Unless stated, in residential roads the preferred method of mounting lanterns is post top however where brackets are required they shall be integral with the column ('hockey stick' type or similar approved by the street lighting engineer). On other road types *w*here a separate bracket is fixed to a column, the assembly of the column shaft and bracket shall incorporate a mechanical locking system in addition to high tensile socket headed securing screws and it shall be possible to fix the bracket in any of 4 x 90º positions relative to the door opening. When correctly fixed, the design of the bracket shall not allow any movement of the bracket either vertically or horizontally with respect to the column. At the point of interconnection, the cross-section of the bracket shall, preferably, equal that of the column shaft. Brackets shall blend with their columns, in material, finish and colour and shall be as short as practicable.

8.2.4 Columns and brackets shall be designed by the manufacturer to meet the following parameters. The developer shall insert where appropriate the required site specific information as shown in Appendix 2 to enable the manufacturer to design the columns in accordance with BS EN 40 and shall when requested submit standard column data sheets to the street lighting engineer.

8.2.5 Base compartments shall afford easy access to cable terminations and wiring. All electrical equipment mounted in the base compartment shall be securely fixed to a 15mm minimum thickness backboard which shall be of a non-hygroscopic material of sufficient size to accommodate any control gear and cable termination units. Doors, which shall be sealed to minimum IP33, shall be provided with a substantial and positive, triangular-headed, tamper proof lock.

The locking mechanism shall be lubricated with grease immediately following installation and if necessary prior to adoption. One key per 16 columns, with a minimum requirement of two keys shall be provided to the street lighting engineer prior to adoption of the development. The earthing terminal provided for steel columns and their doors shall comprise a brass or stainless steel bolt, size M8, complete with nuts and washers. The column shall have a cable entry slot of 75mm in width.

8.2.6 Columns and brackets shall be manufactured from Steel or Aluminium and approved by the street lighting engineer on a site by site basis. All columns shall be of a minimum of medium to heavy duty with a requirement of heavy duty or higher subject to siting and application or weight baring requirement.

❖ Circular tubular steel manufactured from cold-formed hollow sections without heat treatment with constant shaft diameter above the base compartment.

❖ Continuously tapered steel with either circular or polygonal cross-section (minimum 8 sides). Multisided tapered columns shall be press-folded then submerged arc welded down the joint. These style shall not be the norm and only approved in agreement with the street lighting engineer.

❖ Circular hollow tubular aluminium extruded from a solid block of alloy AIMgSio,5 with a satin brushed finish. These style shall not be the norm and only approved in agreement with the street lighting engineer.

Where road conditions require the use of passive safe lighting columns discussions should be held with the street lighting engineer to agree the material to be used. It shall be the designers responsibility to provide proof of application and suitability to agree a suitable solution between all parties and the street lighting engineer.

Steel Columns and Brackets

8.2.7 Steel columns and brackets shall be protected against corrosion at the fabricator's works by the following system:

❖ Surface preparation: the complete column and/or bracket shall be hot-dip galvanised to comply with the requirements of BS EN ISO 1461, the minimum coating thickness to all faces is to accord with Table 2.

❖ Further treatment - after hot-dip galvanising:

- Internal and external surface of planted root only, to 250mm above ground level to be degreased and treated with 'T' wash.

- 2nd coat: item 150 Pitch Epoxy (2 packs) AS, mdft, 100microns, black [As D.O.T./W.A.G. approvals]

8.2.8 In general, galvanised steel columns shall be left unpainted, however, where columns require painting the developer or it's representative shall submit details of the proposed paint system to be used to the street lighting engineer for approval before undertaking any application or installation.

Aluminium Columns and Brackets

8.2.9 The bases of aluminium columns, up to a minimum of 250mm above the proposed ground level, shall be protected by a factory applied system approved by the street lighting engineer.

8.2.10 Door openings shall be reinforced in accordance with BS EN 40-3-1. Flush fitting doors, which shall be sealed to minimum IP44, shall be provided with two stainless steel triangular-headed locks. The locking mechanism shall be lubricated with grease immediately following installation and if necessary prior to the end of the defects correction period. The earthing terminal provided for aluminium columns and their doors shall comprise a stainless steel bolt, complete with nut and two washers. The copper earthing wire shall be installed between the two washers to ensure that the copper cable does not come in contact with the aluminium

Traffic Sign Posts for Illuminated Signs

8.2.11 Posts for illuminated traffic signs shall generally comply with the requirements stated for lighting columns. Posts shall conform to BS873 and BS EN 10210.

All such applications shall also comply with previous instructions, specification and in line with 6.0.

General

8.2.12 The developer or it's representative shall excavate and provide concrete ST2 mix complying with BS 5328, foundations of sufficient thickness to firmly locate the column in the ground having regard to the ground conditions encountered and the column manufacturer's recommendations. Any concrete foundation shall be finished 150mm below finished surface level.

8.2.13 Unless agreed with the street lighting engineer the developer or it's representative shall install a sleeve foundation comprising a twin wall 300mm black pipe set vertically in the ground into which the column is set. See Standard Detail drawing.

The sleeve is to be secure within the ground and to have a 50mm orange duct entering via a chamber at the appropriate height to be placed within the column as previously explained within this specification documentation. The entry slot to the sleeve where the ducting is to be installed within the sleeve shall not exceed 10mm circumference surrounding the orange 50mm sleeve.

8.2.14 50mm dia. Orange PVC service ducting tubes shall be incorporated in all lighting column foundations entering the sleeve and then the column cable entry slot terminating just below the cut out or earthing block arrangement. This is to enable the supply cable to enter the column and to provide a fully ducted private cabled system.

The ducts shall be black for a DNO service or orange for a private supply service. A stranded polypropylene or equivalent rot-proof material draw rope of 20KN breaking load shall be left through the ducting tube to enable the electricity supply cable to be drawn through at all entrances and exits of all ducts.

8.2.15 Lanterns and brackets (where required) shall not be attached to the column until 24 hours after the concrete foundations are laid unless prior agreement has been granted by the street lighting engineer.

8.2.16 Any damage caused during installation to the protective systems applied by the column manufacturer shall be made good immediately following column erection or when the lantern is fitted. All such applications and undertakings shall have photographic evidence of the repair and shall be forwarded to the street lighting engineer for approval.

8.2.17 Where it is necessary to provide flanged base rather than rooted columns, the developer or it's representative shall submit details of the concrete foundation and fixing details to the street lighting engineer for approval prior to any work being undertaken on site.

8.2.18 All columns shall be provided with identification numbers as detailed on the approved plan. The number shall comprise of at least a 50mm (75mm on roads subject to a speed limit greater than 40mph) high white numeral on a square or rectangular background. The number shall be located approximately 3m above ground level (2m on roads with little pedestrian usage) and facing onto the carriageway. Flintshire County Council Streetscene have a specific column numbering scheme which the developer or it's representative can either purchase direct or request and reimburse the authority to supply and erect.

8.2.19 Columns sited on footpaths, or in any area which does not have vehicular access, shall be of the hinged or folding type, as stated in Appendix 3, in order that the column can be lowered into a safe area and maintained at ground level. The developer shall submit to the street lighting engineer for approval details of the type of folding column he proposes to use.

8.3 Lanterns and Illumination Sources

8.3.1 Lanterns shall be:

- Manufactured from marine grade aluminium, totally enclosed and shall conform to BS 4533 and BS EN 60598 and have a minimum degree of protection rating of IP 65 to BS EN 60529. Where a separate gear compartment exists, this shall have a degree of

protection of at least IP 43. Where heritage or decorative lanterns are proposed the type of material used shall be approved by the street lighting engineer.

- Fitted with a photo-electric control unit (Photocell or PECU/NEMA) socket located on the canopy for the installation of a one-piece electronic PECU or be drilled to accept a miniature two-part electronic PECU. On all standard lanterns the arrangement is to be a 7 pin NEMA socket arrangement with a 35/18 lux photocell with a 12 year warranty period. All other applications and locations shall be proposed by the developer or it's representative and agreed by the street lighting engineer.

- Fitted with integral electronic control gear and complete with fuse holder and an appropriately rated cartridge fuse located adjacent to the terminal block which shall be capable of accepting a conductor of 2.5mm^2.

- Installed in accordance with the manufacturer's instructions with no gap between the lantern and the shoulder of any bracket arm. The lantern shall also be installed at the correct design tilt and horizontal alignment and to ensure that the design 'IP' rating is maintained. All fixing bolts shall be mechanically tight and installed as per the manufactures guidance. Where a torque setting is recommended for the fixing screws/bolts, a torque wrench shall be used to ensure that the requirements are met.

- Provided with vandal-resistant (polycarbonate or similar approved) glazing for those lanterns mounted below 8m.

- Of the side entry or direct column mounting type wherever possible. However, consideration may be given to the use of post top decorative lanterns in certain installations subject to compliance with the light output restrictions and the prior approval of the street lighting engineer.

- All lanterns installed on a 6m or below column shall be post top arrangement with all 8m or above installations being installed on a 1.5m bracket arm any deviations or additional requirements to this shall be forwarded with a full explanation for consideration and approval from the street lighting engineer.

8.3.2 All lamp based lanterns shall be fitted with the appropriate electronic control gear with at least an 8 year warranty period. All such lamp based applications shall be pre approved by the street lighting engineer.

8.3.3 Side entry lanterns shall have a positive locking device so as to prevent the lantern turning on its axis.

8.3.4 The lamps, light engine, reflectors, refractors and bowl etc shall be clean and free from obscuring film after installation and the lamp or light engine shall be correctly positioned within the lantern. The bowl or any access panel should be seated uniformly on the gasket seal and the toggle catches secured so that the whole of the unit is dust and weatherproof to the appropriate IP rating.

8.3.5 The upward wasted light ratio [UWLR] of lanterns shall not exceed the recommended maximum for the environmental zone within which the development is located. All current installations shall be of zero upward wasted light and shall be at least class 4 for illumination seating/distribution. Any deviations or installation recommendations outside of this shall require pre approval from the street lighting engineer with certain units requiring shielding to be fitted and or shielding to be fully supplied for future use.

8.3.6 Lanterns installed within 3km of the coast shall be fitted with an approved anti-seagull device to prevent seagulls from settling on the lantern if required and suggested by the street lighting engineer.

8.3.7 In order to assist with future maintenance, the Council requires that the lanterns used on roads which are covered by this specification shall be chosen from the approved list of lanterns given in Appendix 2. Any options or suggestions outside of these shall require the approval from the street lighting engineer.

8.4 Traffic Sign Luminaires

8.4.1 Traffic sign luminaires shall comply with BS EN 60598-1, BS 4533-102.1 and EN 60598-2-1 and shall provide a light distribution in accordance with BS EN 12899. In order to assist with future maintenance, the Council requires that the lanterns used on roads which are covered by this specification shall be chosen from the approved list or pre approved by the street lighting engineer.

8.4.2 Control gear shall be suitable for operation on either an electrical supply of 230 Volts, 50Hz ac or 24 Volt dc as required by the street lighting engineer.

8.4.3 Gear trays shall be provided with a means of electrical isolation and/or disconnection by means of a cable restrained plug and socket which ensures that the earth terminal is the last to disconnect and the first to reconnect without removal of the gear tray unless pre approved by the street lighting engineer.

8.4.4 Control gear for the lamps/light engines shall be securely attached to a galvanised steel or pre approved gear tray, by means of stainless steel nuts, bolts and shake proof washers to ensure sound earth continuity and easy replacement.

8.4.5 In twin lamp or light engine units, the control gear shall be independent and separate so that in the event of a unit failing, at least one unit should continue to function.

8.4.6 Type ‘A’ luminaires shall be supplied complete with a miniature one-piece electronic photocell unit as stated in Clause 8.6.1 unless a previously agreed (by the street lighting engineer) arrangement is supplied.

8.4.7 Traffic sign luminaires shall be obtained from manufacturers approved by the street lighting engineer in order to assist with future maintenance.

8.5 Lamps and Light Sources

8.5.1 Highways which are considered to be traffic routes shall generally be lit using Light Emitting Diodes (LED’s) or if approved by the street lighting engineer, High Pressure Sodium (SON) lamps complying with BS EN 60662. Where these routes pass through commercial areas the street lighting engineer may require the use of “white light” in order to improve facial recognition in the adjacent pedestrian areas.

The currently installed lantern range for light output, CRI (Colour rendition) shall be no less than 60 and Ra (colour temperature) is within the 4,000k range and can be reduced to a minimum of 3,200k in certain locations on the approval of the street lighting engineer. Such locations are areas of outstanding natural beauty, national parks or sites of specific significance. This change of lamp or light source type also reinforces to the motorist the change in character of the highway or footpath at that location.

8.5.2 Highways which are located in residential areas should be lit using “white light” sources.

8.5.3 Preferred “white light” sources are shown in Appendix 2.

8.5.4 All lamps shall comply with the appropriate British or European Standard i.e. BS or BS EN and shall be manufactured within the E.U. by a manufacturer approved by the street lighting engineer.

8.5.5 All lamps shall be marked to show their suitability for operation at the standard supply voltage provided by the DNO.

8.5.6 Lamps used in traffic sign luminaires shall be either PL or LED as stated in Appendix 2.

8.5.7 All lamps shall be from an approved manufacturer as stated in Appendix 2.

8.5.8 Lamps shall be guaranteed for at least 2 years or 8,000 hours of operation. All SON lamps shall be guaranteed for at least 5 years or 20,000 hours of operation. Where lamps have been in service for a period in excess of 2 years, the developer shall install a replacement lamp prior to adoption.

8.5.9 Lamps shall be compatible with the lantern used and must not be fitted in the lantern until the lantern has been correctly fixed to the column/bracket.

8.5.10 Luminaire correlated colour temperature shall be 4,000K or if agreed 3,200K if agreed by the street lighting engineer.

8.5.11 Luminaire’s shall have a CRI of no less than Ra. 60.

8.5.12 LED drivers shall be replaceable throughout the design life of the luminaire and have a warranty of no less than 10 years. LED luminaires shall have a warranty of no less than 20 years on all parts including luminaire body including the Light engine. Confirmation of the warranty is required prior to adoption.

Luminaires shall be Class I insulation and be of Aluminium Construction Marine Grade alloy with Luminaires for road lighting having a degree of protection rating of at least IP66 to BS EN 60529 for luminaires, LED optics and LED drivers.

8.5.13 Luminaires shall be of a totally enclosed design, shall be of sound construction and be capable of being easily dismantled for maintenance.

8.5.14 LED drivers shall be supplied with Constant Light Output (CLO) to an agreed level or shall have an agreement between the developer or its representative and the street lighting engineer.

8.5.15 Luminaires shall be supplied with a 7 pin NEMA socket suitable for the CMS system used on the network where the luminaires will be installed.

8.5.16 The part of the luminaire providing access to the interior of the luminaire shall, when in the closed position, be firmly attached to the fixed part of the lantern. In the open position it shall be attached so that it may not become accidentally detached or blow against the fixed part of the luminaire, bracket or the column.

8.5.17 The canopy, hinges, toggle catches, captive screws and nuts shall be of a cast aluminium or similar noncorroding material.

8.5.18 The luminaire shall have a tilt adjustment of -10 to +5 degrees to enable adjustment when fitting to the existing bracket arms.

8.5.19 In relation to the Maintenance Factor, the luminaire should be provided with the following:

- ❖ Light Loss: L70 or better
- ❖ Cleaning Frequency: 72 Months
- ❖ LED Design Life: 100,000 Hours

8.5.20 IK Rating (Impact Resistance) shall be IK08 or better with all luminaires to be EMC Test Compliant / RoHS Compliant / CE compliant / WEEE compliant.

8.5.21 Luminaire LED modules must be capable of being simply removed and replaced at a later date to enable replacement for failure or to upgrade as improvements are made in LED technology.

8.5.22 Luminaires are to be supplied with approved unmetered supply charge codes (ELEXON Codes) and all LED's shall be tested in accordance with IEC/PAS 62717(LED Modules) and 62722(LED Luminaires) performance requirements.

8.6 Control Gear

8.6.1 Photo-electric control units (PECU's) shall:

- ❖ Be provided for all lighting units including traffic signs.
- ❖ Comply with BS 5972 and be manufactured to a quality level of ISO9002 or equivalent.
- ❖ Provide class 2 protection against electric shock and shall be either:
  - A one-part unit to fit a NEMA socket or grommet fixing.
  - A two-part unit with a separate detector and controller incorporating a test switch.

    In either case the detector unit shall be constructed to provide protection to IP67 against the ingress of dust and moisture and shall be secured to the lantern with an effective weatherproof seal of at least IP65.
- ❖ Be fully electronic with a switching mechanism capable of controlling a reactive lighting load of 10 amps on a 240V 50 Hz supply.
- ❖ Be designed, in so far as is practicable, to fail in the on mode. If a triac or other semi-conductor switching device is fitted, a method of ensuring that the load remains switched to the on state must be provided in the event of an overload destroying the device.
- ❖ Have a minimum guaranteed life of 6 years from their date of manufacture and this date shall be indicated on each individual unit to the street lighting engineer's satisfaction. The guarantee shall not be insurance based and shall be based on testing and component mean time between failure rates. The supplier shall, when requested, provide such supportive testing records and/or written evidence, to support such life-expectancy claims. Any units failing within the guarantee period shall be replaced, free of charge, by the developer, on a one-to-one basis inclusive of all costs associated with their replacement.

- ❖ Be manufactured by a manufacturer approved by the Street Lighting Engineer, see Appendix 2.

- ❖ Have a UV Stabilised Polycarbonate and an LED pulse-encoded to indicate current operating status if required by the street lighting engineer.

- ❖ Be one part for 7 pin NEMA socket type or (where agreed by the street lighting engineer) miniature type mounted on the luminaire canopy.

- ❖ Be fully solid state with a self-test on initial power up with an output via a bi-stable relay and a filtered silicon photo diode sensor.

- ❖ Have a power consumption of less than 0.25 watts and be capable of switching a 5A load.

- ❖ Include a delay device so that the lamps or light source are not switched on by transient changes in the illuminance, proposed switching delay of 10 - 20 seconds.

- ❖ Have sensor drift of zero over a 10 year period and have a guarantee period of 12 years. Proof of warranty will be required and submitted to the street lighting engineer prior to adoption.

- ❖ Comply with BS EN 60068 and EN 50081-1 Emissions and EN 61000 Immunity and have an operational temperature range of -20 ºC to + 80 ºC.

8.6.2 The switching regime shall be as stated in Appendix 2. All units must be indelibly marked with the switch setting, the manufacturer's identification mark, model number and the date of installation.

8.7 Electronic Ballasts and Drivers

8.7.1 Electronic ballasts and drivers shall be:

- ❖ From a manufacturer approved by the street lighting engineer, see Appendix 2, for use in highway electrical equipment and shall be suitable for operation at the standard supply voltage provided by the DNO.

- ❖ Suitable for use with the lamp or light engine used. The terminals to which the lamp/light engine and supply connections are made shall be clearly marked.

- ❖ Mounted in the gear tray fitted to the lantern with terminals shrouded so that no live metal parts are exposed.

8.7.2 All electronic ballasts and drivers shall have the ability to be dimmed and remotely monitored. These shall confirm to the requirements as stated within the street lighting policy and shall be agreed on a site by site basis between the developer or it representative and the street lighting engineer.

8.7.3 Control Gear shall conform to IEC 61347-2-13.

8.7.4 The installer must ensure that the equipment is not connected to electrical supplies unless they comply with the requirement of BS EN 50160.

8.7.5 The insulation test shall be carried out in accordance with the requirements of EN 60598-1.

8.8 Cut-Outs, Isolators, Fuse Holders and Fuse Links

8.8.1 A list of approved manufacturers may be stated in Appendix 2.

8.8.2 Cut-outs and fuse holders shall have moulded drip-proof housings.

8.8.3 Cut-outs for cable terminations shall:

- ❖ Comply with BS 7654
- ❖ Have sufficient separate terminals for all live, neutral and earth conductors. They shall be clearly labelled to differentiate circuits and phases.
- ❖ Incorporate a fuse carrier and be designed primarily for use in street lighting columns and suitable for terminations or looped services.
- ❖ Be complete with any necessary extension box, glands or clips to enable the cable to be terminated and the steel wire armouring to be properly fixed and connected.
- ❖ Must be double pole, have an insulated gland plate with grommets and be rated at 25A
- ❖ Consist of a substantial moulded-plastic enclosure with separate terminals for live and neutral conductors, incorporating a BS88 fuse. Be designed primarily for use in road lighting columns or similar applications and be suitable for terminations or looped services.
- ❖ Have terminals large enough to accommodate the supply cables specified, in single cable or looped cable terminations.
- ❖ Be securely fitted to the backboard by means of at least 3 No stainless steel screws.
- ❖ Labelling and layouts shall be in accordance with the Standard Details or approved drawings.
- ❖ Cut-outs shall be used when the cable termination is located below ground level (bollards).
- ❖ Isolators shall be used when the cable termination is located above ground level (Columns, signs, etc…)
- ❖ Be designed and tested in accordance with BS 7654 and EN 60947-Part 1.
- ❖ Be fitted with a BS88 fuse LST type 23 fuse or similar approved by the street lighting engineer.

8.8.4 Isolators shall:

- ❖ Be designed and tested in accordance with IEC/EN 60269-1, IEC/EN 60947
- ❖ Be fitted with a BS88 fuse MD type

8.8.5 Cut-outs on private supply cables shall incorporate a lockable double pole isolator. In all other cases a lockable double pole isolator shall be incorporated within or installed immediately after the DNO cut-out.

8.8.6 Fuse links shall be cartridge fuses complying with the requirements of BS 88, BS 646 or BS 1361. They shall be of high breaking capacity type and be of a value appropriate to the circuit requirements.

8.9 Wiring and Earthing

8.9.1 All cable must be BASEC approved. Wiring within the electrical unit shall have copper cores and shall be PVC/PVC sheathed 300/500V grade to BS 6004 unless otherwise agreed with the Street Lighting Engineer.

8.9.2 Conductor sizes shall be in accordance with the recommendations contained in the ILP Code of Practice for Electrical Safety in Highway Electrical Operations. The connection between the REC cut-out and the double pole isolator shall be made using double insulated 'tails' – minimum 2.5mm² csa.

8.9.3 Circuit protective and equipotential conductors shall comply in all respects with the requirements of BS 7671.

8.9.4 A circuit protective conductor shall connect the earth terminal on each luminaire to the main earth terminal block mounted on the column back board.

8.9.5 An earth terminal block shall be fixed to the baseboard adjacent to the cut-out and shall be a three-way type capable of accepting a cable size up to 25mm^2.

8.9.6 A main protective bonding conductor shall have a cross-sectional area not less than half the cross-sectional area required for the earthing conductor of the installation and not less than 6 mm². (BS7671, Section 544.1.1).

Where PME conditions apply the earthing conductor of a street electrical fixture shall have a minimum copper equivalent cross-sectional area not less than that of the supply neutral conductor at that point or not less than 6 mm². (BS7671, Section 559.10.3.4).

8.9.7 All exposed conductive parts, as described in BS 7671, shall be bonded to the main earth terminal using an equipotential bonding conductor of not less than 6 mm² cross sectional area. This shall be increased, if necessary, to conform to the DNO's requirements. Access doors shall be bonded using flexible or tri-rated cable.

8.9.8 All earth conductors shall be insulated with green and yellow PVC.

8.9.9 All street lighting and other electrically supplied street furniture shall be earthed and bonded in compliance with BS 7430. On all private network cables it is suggest that the end of each circuit run is earthed.

8.9.10 A permanent label to BS 951, with the words "Safety Electrical Connection – Do Not Remove" shall be permanently fixed in a visible position as stated in BS 7671 Section 514-13.

8.9.11 Connections between the cut-out and Distribution Network Operator's (DNO) apparatus shall be sheathed single core cable (double insulated). With cable for wall mounted solutions shall be HI-TUF, PVC/PVC multicore Copper Cable 70°C to BS5497 rated 600/1000V. But note the intention is that for new installations not to use third party building

mounted luminaires unless prior approval is sought and agreed by the street lighting engineer.

8.10 Electricity Supplies

8.10.1 Unless stated, lighting units shall be fed via a private ducted system and have individual phase supplies on a circuit arrangement from the DNO within a private feeder pillar. The supply service at nominal 230V, AC 50Hz, single – phase shall terminate at a cut-out which complies with Electricity Supply Industry Standard 12-19. Flintshire County Council requires a private ducting and supplied cable management system with any column installation exceeding 2 or more installations.

8.10.2 Where columns are remote from DNO mains **and** following approval by the street lighting engineer, supplies shall be taken at convenient points (feeder control pillars) and distributed to lighting units by private cables or modern and new technologies can be discussed and if agreed by the street lighting engineer installed as instructed.

The DNO will provide a supply within the highway boundary but normally not to a central reserve or traffic island. Lighting units (either columns or signs) sited in these areas will require a private cable supply which can be readily isolated in the near vicinity regardless of number of installations.

8.11 Private Underground Cables

8.11.1 When authorised for use by the street lighting engineer, private underground cables shall:

- Be PVC or XPLE insulated, steel wire armoured, PVC sheathed with stranded plain copper conductors, 600/1000V grade to BS 6346, or split concentric cable as agreed with the Street Lighting Engineer. All conductors shall be of equal cross sectional area and of such size as to carry the designed load and ensure that the voltage drop at the lamp column terminals shall not exceed 3% of the voltage at the supply points. Where a 24 volt supply cable is installed to feed bollards or traffic signs the minimum conductor size may be reduced to 2.5mm^2 subject to the approval of the street lighting engineer.

- Unless agreed with the street lighting engineer all cables shall be 3 core (live, neutral and earth). The cable shall be special “Street Lighting Cable” and shall be marked as such and shall have the cores coloured as brown (live), blue (neutral) and yellow/green (earth).

- Be manufactured by a ‘BASEC’-registered manufacturer.

- Loop between lighting units in a circuit arrangement, feeder pillars, illuminated signs etc. with no underground jointing being permitted. Illuminated signs or bollards shall be fed by cables from lighting columns or feeder pillars. Under no circumstances must cable feeding a lighting column be looped through a sign or bollard.

- Buried cable shall have a minimum length of 2m left as a loop at all feeder pillars and at least 1m within the ducting chambers at column entry points.

8.11.2 No more than three cables shall terminate at a lighting unit and no more than two at an illuminated sign or bollard.

8.11.3 Private 5 core, three-phase sub mains may be laid between feeder pillars.

8.11.4 All cables and cable ducts shall be laid on a bed of sand 100mm deep and covered with a sand layer of equal depth. A yellow, self-coloured PVC or plastic tape, not less than 0.1mm thick and 150mm wide with the wording “STREET LIGHTING CABLE” printed along the full length occupying not less than 75% of its available length and occurring at least at 1m intervals, shall be laid within the backfilling material approximately 250mm vertically above the cable or duct line.

8.11.5 The street lighting engineer shall be advised, at least 15 working days in advance, by the developer of any proposed installation of cable or cable ducts in order that inspection of the cable or duct may be undertaken before it is covered.

8.11.6 Cables shall be individually terminated and secured at switches, cut-outs and other electrical apparatus by means of an armour securing clamp or an aluminium compression-type gland complying with BS 6121 or BS EN 50262 and a gland plate. The armour securing clamp or compression gland and plate assembly shall incorporate at least one non-ferrous earthing terminal. All glands shall be shrouded overall with PVC sleeves and CET system terminations shall be suitably protected.

8.11.7 All cable terminations shall be provided with a non-ferrous label or tag onto which is indelibly marked the cable size and the origin or destination of the cable run.

8.11.8 Earth electrodes shall be provided at the penultimate unit of each private circuit and if necessary at additional points in order to obtain the necessary test results. They shall comply with Engineering Recommendation G12/2 published by the Electricity Association. The earthing system components shall comply with BS7430; the rods shall be cast gun metal with phosphor bronze bolts. The terminal point shall be protected by a purpose-made inspection pit complete with a heavy duty cover and frame.

8.11.9 In the event of cable damage, however slight, to any lighting or electrical unit the developer or it’s representative shall immediately inform the street lighting engineer who will assess the damage and determine what action is required. The repair of the damaged cable shall be treated as directed by the street lighting engineer and shall be carried out at the developer or it’s representative expense.

8.11.10 Failure to report and rectify such damage or defects will be treated as a noncompliance to the specification and approval and as such could result in further investigational works being instructed by the street lighting engineer with all required operations and works being carried out at the developer or it’s representative expense.

8.11.11 Sheath damage shall be repaired by an approved sheath repair under instruction of the street lighting engineer.

8.11.12 If the damage to any cable extends into the cable armouring, then a new length of the same cable is to be installed, as follows:-

Jointed System, the existing 'tee' service joints for each column either side of the damaged area are to be cut out and a new length of cable jointed in. The new joints are to incorporate the straight joint connection between the existing cable and the new, together with a new cable to the lighting column laid adjacent to the original cable route. The old cable is to be removed.

Looped System, the existing cable 'loop' shall be replaced between adjacent columns.

All and any such defect and damage repair shall be carried out at the developers or it’s representatives expense and in accordance with and satisfy the street lighting engineer.

8.12 Ducting Systems – Refer to Standard Details

8.12.1 The type of ducting system to be installed i.e. ducted or fully ducted together with approved manufacturers shall be stated in Appendix 9.

8.12.2 In order to facilitate future maintenance all private cables shall be installed in a ducted system which shall have draw chambers installed at major changes of direction and at the ends of each road crossing.

8.12.3 In fully ducted systems the arrangement of ducting and cable access chambers shall be so constructed that any cable can be installed or replaced without the need for any further excavation in the ground, carriageway or footway.

8.12.4 Cable ducts shall be a minimum of 100mm nominal diameter for road crossings with a minimum of fours ducts for carriageways and a minimum of two for footways per run unless agreed with the street lighting engineer. 50mm orange flexi ducting shall be used connecting ducting and chambers to columns and sized in accordance with the recommendations in BS 7671. They shall be pliable, non rigid, plain, high or medium density, smooth bore polyethylene with a minimum wall thickness of 5mm or twin wall duct to BS EN 50086.2.4 and coloured orange with the words “STREET LIGHTING” painted in 9mm lettering along the length of the duct at intervals of not more than 1m. When laid, the wording shall be uppermost, and all lengths will be jointed or sleeved to give a continuous smooth bore.

8.12.5 Ducts should be impervious to water, impact resistant, capable of being laid at temperatures down to -10^0C and sufficiently flexible to follow undulations in the trench bottom. They shall be of sufficient strength to not require concrete surround or granular or selected backfill at the depths laid.

8.12.6 Where ducts are installed for use by the DNO they shall be installed generally in accordance with this section however the duct shall be coloured black and no intermediate chambers are required between the DNO main or supply point and the cable termination point. However, a chamber will be required at the point in which the supply to the relevant feeder pillar is situated.

8.12.7 Ducts shall be swabbed through prior to drawing-in the cable(s). On completion of the cabling the duct shall be left with a pigmented stranded polypropylene or equivalent, rot-proof material draw rope of 20KN breaking load and having a design life of not less than 20 years. Ends of ducts not terminated at an access chamber shall be sealed to prevent the ingress of water along with all ducts within the relevant feeder pillars.

The street lighting engineer may require additional ducts to also be capped or terminated and these will be instructed on a site by site basis.

8.12.8 Access chambers (minimum dimensions 300 x 300mm) shall be modular and of sufficient size to enable easy access to the cables having regard to their depth. The units shall be manufactured from high-density polyethylene, stackable and with preformed cut-outs for the cable duct entries. The developer or it’s representative shall submit details of the type/manufacturer of the access chambers he proposes to use for approval by the street lighting engineer. Flintshire County Councils preferred stacking system is the Titan 1 D400+ range of chambers.

8.12.9 Chamber covers and frames shall be manufactured to BS EN 124 and shall be at least class B125 (please refer to Standard Detail for alternatives, depending on the location of the cover and frame). All covers and frames shall be designed to carry the loading

appropriate to the installed location. Cover frames shall be deep frame style and fully bedded on a concrete base, surround and accurately set for level and position, if necessary on a 225mm thick plinth, and aligned with the nearest adjacent kerb or building

8.12.10 Excavation around chambers and manholes shall be backfilled with fill material complying with BS 1377 Part 2, properly compacted. Where mechanical compaction is impracticable, the excavation shall be backfilled with mix ST2 concrete complying with BS 5328 and of 150mm minimum thickness. All such installations shall fully comply with the manufacturers guidance or shall have prior permission to defer from these from the street lighting engineer.

8.12.11 Any chamber installed within a soft verge, grass space or open space shall have a mowing strip installed at least 250mm surrounding the frame and have a slightly raised position with the concrete plinth/surrounding being taped away from the lid and frame towards the open or grass verge/space. All such installations shall fully comply with the manufacturers guidance or shall have prior permission to defer from these from the street lighting engineer.

8.13 Trenches for Cables and Cable Ducts - Refer to Standard Details

8.13.1 All excavations shall be made with vertical sides unless otherwise approved by the private street works engineer. The sides of trenches and pits shall be adequately supported at all times so as to maintain the stability of the adjacent ground. Support shall conform to CP 2003 Earthworks Part 2 - Trenches, Pits and Shafts.

8.13.2 Trenches shall be excavated to the depth shown on the standard detail in order to give a depth of cover of approximately 450mm in verges, footways and open ground and 750mm under carriageways. The width of the trench shall be kept to a minimum.

8.13.3 Adequate precautions shall be taken to prevent water collecting in excavations. Whenever water collects in an excavation it shall be pumped out and the bottom of the excavation allowed to dry before cable or duct laying commences. All chambers shall have a concrete base with adequate drainage and a covering of pea gravel.

8.13.4 Backfilling shall be undertaken immediately after the laying, inspection and surrounding of cables or cable ducts using fill material complying with BS 1377 Part 2.

8.13.5 The reinstatement of all trenches shall conform to the appropriate section of the New Roads and Street Works Act, 1991 Specification for the Reinstatement of Openings in Highways and the requirements of this document in respect of trench reinstatement except that the first 200mm depth of backfill shall not contain any material having a nominal size exceeding 40mm and that the developer shall spread and compact the backfill material evenly so as not to dislodge, disturb or damage the cable or cable duct. No power rammers shall be used within 300mm of any cable or cable duct.

8.14 Feeder Pillars

8.14.1 A list of approved manufacturers may be sought from the street lighting engineer.

8.14.2 The location of feeder pillars shall be agreed with the street lighting engineer on site prior to installation. Where the feeder pillar is sited in soft landscaping areas and it is not possible to park a vehicle immediately adjacent, the street lighting engineer may require the construction of a hardstanding for use by maintenance vehicles.

8.14.3 Feeder pillars shall be constructed from not less than 5mm thick steel. They shall be sealed to minimum IP65 on the doors and IP45 on the vent louvres. They shall include a full size marine backboard of varnished marine plywood at least 15mm thick or other approved non-hygroscopic material. Alternatively, a purpose-designed equipment mounting system may be used. The entry for cables shall be via the root.

8.14.4 Doors shall be fitted with standard tri locks. The locking mechanism shall be lubricated with grease immediately following installation. Two sets of keys shall be provided to the street lighting engineer prior to the adoption of the installation if the key mechanism is of a different or non standard style, otherwise, the standard number of keys as previously explained shall be forwarded upon adoption.

8.14.5 Where directed by the street lighting engineer, ventilation shall be provided to prevent the build-up of condensation and in such cases the feeder pillar shall be protected by vermin-proof screens.

8.14.6 Protection against corrosion shall be by hot-dip galvanising to BS EN ISO 1461, the minimum coating thickness to be in accordance with Table 2 thereof.

8.14.7 All doors are to be provided with an earthing strap in accordance with clause 8.10.7, above.

8.14.8 The developer or it's representative shall submit details of the feeder pillars which are proposed for use in the installation to the street lighting engineer for approval before work on the installation commences.

8.14.9 Feeder pillars shall be mounted on a 250mm thick foundation of concrete ST2 mix complying with BS 5328. They shall be rooted or provided with fixing bolts to enable the unit to be securely located. Unless stated in Appendix 2, after completion of the cabling, any void under the feeder pillar base shall be filled to 25mm below the door with rounded aggregate, maximum size 14mm, and sealed overall with a cold pour compound of an approved type to prevent the ingress of moisture from below allowing for a drainage pipe to be installed. A minimum of x 1 spare 100mm diameter cable duct shall be provided through the concrete surround from the base of the feeder pillar.

8.14.10 For feeder pillars sited in grassed areas, a 600mm width of hard surfacing shall be laid with the surface flush with the ground across the width of the feeder pillar in front of the door. The other sides of the feeder pillar shall be similarly surrounded with hard surfacing 200mm. in width. All hard surfaced areas shall slope away from the feeder pillar.

8.14.11 The feeder pillar shall be a minimum of 110mm x 150mm x 700mm size but shall be sufficient to accommodate:

- The incoming supply cable including cut-out.
- A lockable double pole isolator [if not included in the cut-out].
- Any contactor and/or photocell relay.
- A distribution board for all highway electrical feeds including sufficient spare capacity to accommodate at least one extra circuit.
- All necessary fuses and the like.
- At least 25% spare space on the backboard upon completion.

8.14.12 Where larger feeder pillars (where a distribution fuse board is installed) are required the following additional equipment shall be installed:

- ❖ Heater (inc of frost stat)
- ❖ RCD
- ❖ Interior light (low energy)
- ❖ 13A Socket
- ❖ Documentation wallet
- ❖ Isolator (preferred option is a rotary type)

8.14.13 Distribution fuse boards of the HRC type shall be provided with an external earth, phase barriered and colour coded. They shall be fitted with the same number of live and neutral bus bar terminals as there are outgoing circuits plus at least one spare way.

8.14.14 A circuit diagram and labelling showing details of interconnection of equipment and the connection of cables to and from the pillar, all indelibly drawn or engraved on a material not subject to damage by the environment or normal use, shall be securely fixed internally to each feeder pillar after completion of the installation.

8.14.15 An earthing system shall be provided in each feeder pillar. It shall accept the incoming earth facility from the supply authority onto an earthing bar or terminal strip and interconnect all outgoing cable earth connections and the bonding of the feeder pillar. The earthing facility shall accommodate up to 25mm^2 conductors. Where required by the street lighting engineer, a suitably rodded external earthing system as specified previous, shall also be provided, independent of and in addition to, any earthing system provided by the incoming supply authority/company.

8.14.16 All feeder pillars shall be fitted with a durable warning sign, fitted externally and in a prominent position, indicating “DANGER 415 VOLTS” or “DANGER 240 VOLTS” as appropriate and a ‘lightning flash’ in black on yellow.

8.15 Electrical Equipment Fixed to Buildings

8.15.1 Where approval has been given under Clause 2.1.4 for highway electrical equipment to be fixed to buildings the following Clauses apply.

8.15.2 Cables fixed to the surface of a building shall be PVC sheathed cables or ‘Hituf’ cable or other alternative approved by the street lighting engineer. The colour of the cable sheath shall be such as to blend with the colour of the building or structure. In environmentally sensitive areas, cables may need to be painted to match the colour of the building. Surface cables shall be protected by means of galvanised steel conduit or cable shield up to 2.5m above ground level. Mains supplies shall be terminated in mini feeder pillars sited in the highway and the conduit made off into this.

8.15.3 All terminations of surface cable are to be completed using glands of approved manufacture. The making-off of such glands shall only be carried out by suitably qualified personnel.

8.15.4 The use of junction or termination boxes shall be restricted to those locations adjacent to the wall brackets where it is necessary to terminate the surface cable and to provide a heat resistant flexible cable [within a flexible conduit if necessary] from the box to the lighting unit.

8.15.5 Cables shall be supported on the building surface using approved saddles, the spacing of which shall conform to the recommendations of BS 7671.

8.15.6 The dimensions of the base plate of wall brackets must be kept to a minimum having fixed centres generally not greater than 200mm in the vertical or horizontal planes. All brackets shall be fixed with 4 bolts of sufficient size for the anticipated loadings. Fixing details and calculations of loading from a Structural Engineer must be submitted to the street lighting engineer prior to approval being given for the installation to take place and independent test certificates for the fixings shall be submitted after installation.

8.15.7 The internal surfaces of all fixing holes drilled into walls or other structures shall be sealed with an approved silicone sealant prior to the insertion of the fixing bolts.

8.15.8 All wall brackets shall be installed to provide the designed mounting height of the lantern above ground level.

8.15.9 Electricity supply cables shall be terminated in a weatherproof control box of minimum size to accommodate the cut-out and any control or isolation equipment.

8.15.10 Wiring between the control box and the wall bracket shall be carried out using cables specified in previously in the specification and they shall have a minimum conductor size of 1.5mm^2 or better. All cable glands shall be fitted with PVC shrouds.

8.15.11 Control boxes shall be constructed of galvanised steel or corrosion resistant alloy or ABS or GRP but shall be approved by the street lighting engineer for each application and location. They shall be sealed to a minimum IP54. Doors shall be fitted with tamper-proof locks of the same pattern as used for columns. The control box shall incorporate a backboard of hardwood or other non-hygroscopic material onto which the control equipment, service cable and cut-out can be firmly fixed.

8.16 Electrical Charging and Electrical Vehicle Charging Points

8.16.1 It is the responsibility of the developer or it's representative to notify the DNO of an electric vehicle charge point installation. To notify the DNO of an electrical vehicle charging point or electrical charger installation, you must complete an ENA application form and email it to the local DNO. Completion and submitting the form itself is not acceptance of the installation and if the installation effects the adoptable highway network or Flintshire County Council infrastructure then further consultation and approval will be required from the street lighting engineer.

8.16.2 EV charging cables can not crossing the adopted highway network including pavements, footways or paths. You cannot place any electric vehicle charging cable across the pedestrian footway, even if it is covered by a cable cover or mat.

This is because a power cable running across the footway, even if covered, is a potential hazard. It can also make access more difficult for disabled and vulnerable groups. If an injury occurs, this might result in a liability claim for the homeowner or occupier and the authority.

Flintshire County Council have a legal duty to ensure the safety of the highway in accordance with the Highways Act 1980 and the Health and Safety at Work Act 1974. Placing an obstruction such as a wire or cable across the highway in a way likely to cause danger is an offence under the Highways Act 1980. Any electrical equipment on the highway also must be certified and regularly tested as electrically safe.

8.16.3 To apply for such requests to install or have a charge point or cable in such locations the developer or it's representative must engage with the planning department and complete

the relevant applications from a planning aspect and also complete a Streetscene and Transportation application form for the approval of the erection of equipment onto street furniture and items in or above the Highway upon Flintshire County Council illuminated or non illuminated street furniture.

All applications for such installations will be viewed on a site by site basis and shall not proceed until the street lighting engineer has agreed and confirmed the installation. Certain installations may incur or have certain restrictions, timeframes and conditions applied upon them.

8.16.4 The installation and maintenance of such installations will require ongoing communication between the asset holder and Flintshire County Council (street lighting engineer) to ensure the safety of all. These requirements will be confirmed upon any approval and will be binding to the party or asset owner in question.

8.17 Defibrillator (AED)

8.17.1 The UK Government has announced that by the end of the academic year 2022/2023, all schools in England should have at least one AED on their premises. Employers are encouraged to consider providing an AED as part of their first aid risk assessment. In turn the Welsh Government recognises the value of defibrillators in certain circumstances and the Welsh Ambulance Trust (WAST) has introduced them into key public spaces.

A person's chance of surviving an out-of-hospital cardiac arrest decreases by an estimated 10% with every passing minute. Currently, every year in Wales around 6,000 people suffer sudden cardiac arrest. Therefore to increase a persons survival rate Flintshire County Council will consider the installation of defibrillators on the adopted highway network.

8.17.2 A defibrillator uses moderately high voltage (between 200 and 1,000 volts) to shock the heart, which essentially resets the SA node and forces it to resume its normal electrical activity. The voltage delivered to the patient depends on the presence of a heartbeat and how strong, fast, or slow it is.

In order to work properly, an AED does require some maintenance, or it may not work reliably in an emergency. Other than replacing parts as recommended by the manufacturer, this primarily involves regular testing and inspections as directed by the manufacture.

8.17.3 Who is responsible for the maintenance of defibrillators ?

The defibrillator would remain within the ownership of the organisation or community whom has installed or requested the installation. It would be their responsibility to ensure that it is checked regularly, to establish that it is in good working order and that the defibrillator pads are in date. It would also be their responsibility to ensure the safety of the unit and that it causes no danger to the public or wider user.

8.17.4 Do defibrillators have to be registered ?

It is important that the owner of the unit(s) make sure all machines are registered with the national defibrillator network, 'The Circuit' enabling the emergency services to locate and advise you where the nearest defibrillator is should a user need this, potentially, lifesaving piece of equipment.

8.17.5 How do I apply for the installation of a defibrillator (AED) on a Flintshire County Council asset/infrastructure or adopted highway network ?

As this is a new technology and only a small number of units have been installed, Flintshire County Council, Streetscene and Transportation are still reviewing and assessing the most practical and best solution for such installations.

It is therefore requested that early engagement and communication is made via the group, developer or it's representative with the street lighting engineer. Following this communication, a number of actions stall take place (subject to amendment during the process) and the following will be required to assess and confirm the suitability of the installation.

- Contact details (Owner/Location/Installer/Maintenance)
- Defibrillator type
- Shock profile (joules)
- Battery life (years if unused) and replacement process
- Electrode life (standby mode) and replacement process
- CPR information and guidance
- Child use (7 and under)
- IP rating
- Confirmation of language
- Weight and (windage if required)
- External communication and data connectivity
- Maintenance period
- Energy use and confirmation of payment process of the units energy
- Installation location (proposed)
- Cabinet unit to be used along with electrical standard classification
- Cabinet information

8.17 Vehicle Activated and Messaging Signs

8.17.1 The Road Traffic Regulation Act (RTRA) defines a traffic sign as: "any object or device (whether fixed or portable) for conveying to traffic on roads or any specified class of traffic, warnings, information, requirements, restrictions or prohibitions of any description…". Lawful traffic signs must either be prescribed by regulations or authorised by the Secretary of State.

The Traffic Signs Regulations and General Directions (TSRGD) define a variable message sign as: "a device capable of displaying, at different times, two or more aspects…". These aspects may take the form of a sign prescribed by TSRGD, a legend in accordance with Schedule 15 to TSRGD, a non-prescribed temporary sign or a blank grey or blank black face. Thus, the expression "variable message sign" (VAS) encompasses all types of variable sign from simple flap-type fixed signs to complex light-emitting panels.

8.17.2 A VAS may only be placed on or near a road if it is of a type approved by the Secretary of State. This type approval applies to the equipment in its entirety, including the content of all instructions stored in or executable by it, and any equipment used in connection with the sign. The requirements and approval process are set out in Highways Agency document TR 2516B5, "Performance Specification for Discontinuous Variable Message Signs".

All parts of the sign other than those facing traffic should be coloured in a dark colouring such as grey or black and/or be in a nonreflective metallic finish. Any lettering required for identification purposes should be no more than 25mm high on the sign housing or, if applied by means of a label, should be printed on a label that is either transparent or the same colour as the sign housing. On no account should any label or any part of the sign housing comprise retroreflective material. VAS must conform to the requirements of BS EN 12966-1:2005+A1:20096.

Any such deviations or additional requirements outside of these will require an appropriate method statement which will require full approval from the street lighting engineer in be in accordance with the Welsh Government Procedure & Advice Guidance (PAG) 106/16.

8.17.3 It is important to recognise that the use of VAS and VMS they are not only utilised for speed management initiatives but also for aspects such as

- ❖ The use of appropriate speed limits with the associated signing
- ❖ Specific speed awareness and campaigns
- ❖ Speed education and driver awareness
- ❖ The use of physical and non physical traffic calming measures
- ❖ To educate road users
- ❖ To identify a specific hazard (Cattle Crossing, School Crossings etc)

8.17.3 All locations which require such installations are required to be fully assessed by the street lighting engineer and then approved prior to erection or installation regardless of permanent or temporary requirements. Such applications will require complete adherence to the relevant standards and a method statement for erection from the proposer, the developer or its representatives.

The method statement and request shall include the following

- ❖ The rationale for the installation
- ❖ Date range of the installation
- ❖ Supply requirements and supply point including the relevant UMSUG code
- ❖ Confirmation to the relevant standards
- ❖ Confirmation of compliance of the unit to be installed to Flintshire County Council Standards
- ❖ Installation requirements and proposal
- ❖ Funding stream and or commuted sum

8.18 New Technologies and Out of Scope Installations

8.18.1 Any new or proposed technologies and out of scope developments, apparatus or equipment will be assessed subject to service and Flintshire County Council requirements and service needs.

All such applications and requests should be presented directly to the street lighting engineer for consideration. All and any such proposed technologies will be subject to full approval form the street lighting engineer and may be rejected. This equipment, if approved may require an increased commuted sum and will be calculated and agreed by the street lighting engineer and the proposed developer or its representative.

Reasonable additional requirements maybe imposed by the street lighting engineer subject to the proposed equipment and its location in which it is to be utilised and operated at and for.

Appendix 1 – Schedule of Proposed Lighting Equipment
(to be completed by the Developer or its Representatives for approval prior to any installation work)

Proposed Development at: _____

Developer: _____

Address: _____

Contact Details: _____

Agent / Contractor: _____

Address: _____

Contact Details: _____

DETAILS OF PROPOSED PUBLIC LIGHTING INSTALLATION

1. Does this development form part of a larger development?_____

If so, Please provide additional details _____

2. Will the street lighting on this development be installed in phases?_____No. of Phases_____

3. No. of lights: on this phase _____on whole development_____

COLUMNS

Mounting Height	Material	Manufacturer's Name	Catalogue Name / Ref.	Bracket Type	Outreach

LANTERNS **INTERNAL WIRING**

Type (Side Entry etc.)	Manufacturer's Name	Catalogue Ref	Bowl Material	Cable Size	Type

LAMPS/LIGHT ENGINE **ELECTRONIC BALLAST**

Type	Wattage	Manufacturer	Manufacturer	Model / Cat. No.

SWITCHING CONTROL

Group or Individual	P.E. Cell	Type	Manufacturer	Cat. No.	Location of Switch Points if Group Control

LOCKABLE DOUBLE POLE ISOLATORS

Manufacturer	Model / Cat No	Rating

FEEDER PILLARS

Manufacturer	Model / Cat No	Location

ELECTRICITY SUPPLY

No. of Lights on Direct Mains	No. of Feeder Pillars	Type and Size of Loop Service Cable		No. of Lights On Circuits	Material of Feeder Pillar	Manufacturer of Feeder Pillar
		Circ. 1				
		Circ. 2				
		Circ. 3				

ADDITIONAL INFORMATION

_____

_____

_____

_____

I agree to comply with / to the Flintshire County Council Street Lighting Specifications and adhere to it's content

SIGNED_____

NAME _____

ON BEHALF OF_____

DATE_____

APPENDIX 2

Flintshire County Councils preferred Lanterns, Illuminated Traffic Signs, Bollards, Centre Island Lamps and Traffic Signs

All lanterns are to be fitted with electronic ballasts or drivers with a warranty of 10 years for ballasts and 12 years for drivers, PECU of 12 years, Son lamps 5 years and CPO lamps 4 years. These shall be given to Flintshire County Council in writing prior to adoption with an installation date.

In order to assist with future maintenance, the Council requires that the lanterns used shall be chosen from the current approved list or unless approved by the Street Lighting Manager in writing.

Functional and Modern Lanterns

Residential Roads, Industrial Estate Roads, Primary Roads, Principle Roads, Town Centres and Public Areas

Vision Lockheed / Valiant Range (Nema, AKZO900 Aluminium Body).

Functional and Modern Lanterns

Paths and Footways

Vision Lockheed / Valiant Range (Nema, AKZO900 Aluminium Body).

Alternative Functional and Modern Lanterns

To be approved by the Street Lighting Manager.

1930's Lantern or Heritage Lantern and Other Lanterns

All Areas

To be approved by the Street Lighting Manager.

Dimming or Remote Monitoring Equipment

All Areas

To be approved by the Street Lighting Manager.

Type A and B traffic Sign Lighting, Bollard and Other Traffic Sign Lighting

All Areas

LED (To be approved by the Street Lighting Manager)

APPENDIX 3

Flintshire County Councils preferred mounting height and type of Columns

Residential Roads and Subsidiary Roads

6 Meters steel galvanised, tubular column heavy duty (CU Phosco R2506T01H5030 or similar approved)

Paths and Footways

5 or 6 Meters steel galvanised, drop down, tubular column heavy duty (CU Phosco RM505T01H50 DL2 / RM506T01H50 DL2 or similar approved)

Industrial Estate Roads and Car Parks

6 or 8 Meters steel galvanised, tubular column heavy duty (CU Phosco R2506T01H5030 / R2608T01H5040 or similar approved)

Main Traffic routes

8, 10 and 12 Meters steel galvanised, tubular column heavy duty (CU Phosco R2608T01H5040 / R26010T01H5040 / R2612T01H5040 or similar approved)

High speed and Dual carriageways

12 and 15 Meters steel galvanised, tubular column heavy duty (CU Phosco R2612T01H5040 or similar approved)

Miscellaneous and other locations

To be submitted for approval by the Street Lighting Manager.

Alternative Column Sizes

To be submitted for approval by the Street Lighting Manager.

APPENDIX 4

Energy and Maintenance

1 Prior to adoption by the County Council, the Developer will place with Flintshire County Council a commuted sum equivalent to 10 years of energy consumption for the system being adopted and for maintenance of the system for a period of 10 years. These commuted sums will be communicated to the Developer during the pre-adoption process.

2 The Developer shall otherwise remain responsible for the whole installation including three yearly cleaning and lamp changing as required (evidence to be retained and made available on request) replacement in the event of accident or vandal damage, etc., until the date of formal adoption of the installation.

3 If adoption isn't agreed within 2 years from the date of the approval, then a full bulk lamp (where lamps are used), ballast / driver, photocell and associated parts change will be required. If adoption isn't agreed within 8 years from the date of the approval then a complete lantern and associate parts change will be required, this may at the Street Lighting Manager discretion also include columns and posts. If adoption isn't agreed within 10 years from the date of the approval then a complete column/post replacement scheme shall occur.

4 In the event of an emergency situation arising prior to adoption, such as vehicular accident damage, column doors missing etc, and when the Developer cannot be contacted within 15 minutes, the Council reserves the right at its sole discretion to arrange for its Street Lighting Department to be dispatched to make safe and to recharge the Developer with the costs incurred.

APPENDIX 5

Painting

1. When required or instructed painting shall comply with the following:

Any access doors shall be removed to enable the edges of the door and the exterior of the item normally covered by the door to be painted. All removable attachments to items to be painted shall be removed prior to painting and replaced upon completion of painting. Generally these will comprise column number plates, litter bins, banding tape and small signs and notices. The correct unit number plate must be replaced within one working day of completion of painting.

2. Preparation

All surfaces to be painted must be free of dampness, grease, frost etc, and shall be cleaned down by scrubbing using a stiff bristled brush, clean cold water and a detergent and finally rinsed down with clean cold water. All areas of rust, scaled and flaking paint must be scraped, wire brushed and abraded to bright metal, if necessary using mechanical tools to firm a tight edge and a patch prime coat applied before the two main coats. All preparation work shall be completed to the satisfaction of the Council's Representative before the application of a further coat of paint.

3. Paint Application

All paint shall be applied by brush only and should be well brushed into the surface of the metal and all parts shall be completely covered with a film of the specified systems and thickness. Application shall be as recommended in the paint manufacturer's Product Data Sheets. Product data sheets are to be submitted at the time of formal adoption or on request. Paints shall comply with the appropriate British or European Standard. All work involving a particular coat of paint shall be completed to the satisfaction of the Council's Representative before the application of a further coat of paint. Each coat of paint shall be of a different colour but the same colour shall be consistently used for any particular coat.

APPENDIX 6

Competence and Accreditation

1 The installer of the lighting and electrical installation must be NICEIC or ECA registered, National Highways Sector Scheme accredited and experienced in the installation of highway electrical equipment and qualified to provide official completion and test certificates.

2 The installer shall provide method statements including risk assessments and copies of the relevant cards as requested to the Street Lighting Manager before any works be undertaken for proposed adopted civil, electrical and illuminated works including any traffic or signalisation works within Flintshire.

3. All other miscellaneous operations (Contractor, Installers, Maintainers etc) based and covered within this documentation shall hold the above qualifications and accreditations along with other requirements as required and directed by the Street Lighting Manager's instructions and requirements. Such requirements maybe, Chapter 8, IPAF, Working At Heights etc

4. For variations to this and the above an application for and to carry out works within the adoptable highway network, Streetscene and Transportation infrastructure or for applications which affect the above, prior approval must be sought and gained from the Street Lighting Manager.

APPENDIX 7

Remote Monitoring System, New Technologies and Energy Saving Equipment

1 Dimming is to be installed in all new developments where appropriate only after discussion and acceptance from the Street Lighting Manager in writing.

2 Further details will be provided by the Council when the design is submitted or upon request from the Street Lighting Manager.

3 New technologies and energy saving equipment maybe installed only after discussion and acceptance from the Street Lighting Manager in writing, in line with Flintshire County Council Policy.

4 All Photocells installed shall be 55/28 lux or 35/18 which will be confirmed by the Street Lighting Manager.

5 Following Flintshire County Councils Policy certain locations shall be part night switched. These locations will be advised to the installer and / or developer upon application and submission of design.

APPENDIX 8

Sign Plates and Banners

1 Sign plate(s) with a total projected windage area in excess of 0.3 sq.m shall not be affixed to lighting columns unless approval has been sought from the Street Lighting Manager in writing prior to the installation.

2 Banners shall not be affixed to lighting columns unless approval has been sought from the Street Lighting Manager in writing. Any banners installed without prior consent shall be removed with all costs incurred borne by the person or company who installed the banners.

APPENDIX 9

Flintshire County Councils preferred ducting arrangement

1 Titan 1 plastec range or similar approved by the Street Lighting Manager on site by site basis inc of deep frame lid and frame. Chamber to be a D400+ with a lid of B125.

2 A minimum of 2 Orange 100mm ducts to be installed (450mm) at all locations within a pathway or footway and a minimum of 4 Orange 100mm ducts to be installed at road crossing (750mm). With at least 2 Orange 100mm ducts spare for road crossings and 1 Orange 100mm duct spare for footways. No more than 4 cables to be installed within any duct without prior approval form the street lighting engineer.

3 1 Orange 50mm duct is to be installed from the duct box to the 300mm sleeve to the column entry port with a minimum of 300mm internally protruding upward towards the cut out within the column.

4 Drainage is to be installed in all chambers and feeder pillars with a bed of gravel. For clarification on installation please discuss and seek approval from the Street Lighting Manager.

5 The Street Lighting Manager shall be provided with a set of access keys from the developer or its representatives to and for the chambers at 1 set per every 16 chambers installed prior to final adoption.

Flintshire County Councils preferred feeder pillar arrangement

1 All feeder pillars are to be hinged and a minimum of 5mm thick, please discuss and seek approval from the street lighting engineer for feeder pillar requirement on a site to site basis.

2 Drainage is to be installed in all feeder pillars with a bed of gravel. For clarification on installation please discuss and seek approval from the Street Lighting Manager.

APPENDIX 10

Commuted Sums

1. A commuted sum shall be applied to all proposed Street Lighting, Traffic Signals and External Electrical Infrastructure which is placed forward for adoption. These shall be calculated by the Street Lighting Manager on a site by site basis and subject to and in line with the street lighting policy.

2. An agreement between the developer or its representative and the street lighting engineer will be discussed and agree where a standard of materials exceeds the standard specification and as such, shall incur higher maintenance costs, a commuted sum shall be calculated and agreed prior to the granting of technical approval. This is discussed and explained within the documentation.

3. The commuted sum shall be payable to the authority prior to adoption of the completed scheme.

4. The commuted sums shall be calculated by the street lighting engineer which will include items and materials such as the following and their proposed life span/warranty period as defined by the Street Lighting Manager for example:

1. Columns
2. Brackets
3. Lanterns
4. Photocells
5. Light engines/LED’s/Lamps
6. Cable and associated parts
7. Feeder pillars
8. Ducting chambers and associated parts
9. Internal items within columns and feeder pillars
10. Maintenance visits
11. Electrical and structural inspections
12. Energy use

APPENDIX 11

Close Circuit Television (CCTV)

1. All CCTV applications and installations within and viewing over the adopted highway network or Streetscene and transportation infrastructure will require prior approval for erection and use from the Street Lighting Manager.

2. All relevant documentation in relation to the erection, maintenance and requirement shall be forwarded to the Street Lighting Manager for consideration and approval.

3. All contractors, installers, maintainers and appropriate users shall hold the relevant and required qualifications, experience and accreditation as required by the Street Lighting Manager.

4. All contractors, installers, maintainers and appropriate users shall adhere to the BS 7958 and Surveillance Camera Code of Practice.

5. All installations shall be in accordance with the Street Lighting, Traffic Signals and External Electrical Infrastructure Policy, Design and Requirement Specification. As such all requirements for installation, testing, maintenance and removal shall be adhered to.

6. All contractors, installers and maintainers shall hold the relevant qualifications, experience and accreditation to carry out the required operations within the highway and on the adoptable systems. These must be in accordance with the Competence and Accreditation section above.

APPENDIX 12

Street Lighting, Illuminated Street Furniture or Items Erected Over the Adopted Network

1. Application for approval to the erection of materials, illuminated, festive or decorative items in or above the highway or Streetscene and Transportation infrastructure upon Flintshire County Council illuminated or non Illuminated street furniture or buildings requires prior approval from the Street Lighting Manager in line with the above specification.

2. To request erection in line with the above the application must complete the Street Lighting, Illuminated Street Furniture or Items Erected Over the Adopted Network application form within 28 working days prior to erection. Failure to comply to and with this timeframe could result in the application being automatically refused.

3. All electrical installations must have a supporting BS 7671 electrical test certificate on completion of installation and a confirmation test certificate upon removal. All Mechanical installations shall also forward proof of load bearing and installation requirements along with any windage calculations subject to the installation type.

4. All installations must be carried out by a reputable and competent installer and approved by Flintshire County Councils Street Lighting department in line with Flintshire County Council Street Lighting Specifications.

5. Installations can only commence after an acceptance certificate has been issued by the Street Lighting Department to the relevant parties. Failure to comply to and with this will result in refusal of the installation and all associated costs recharged back to the relevant party.

6. Any installation found to be defective will be rectified by Flintshire County Council Street Lighting Department and any cost incurred, will be recoverable.

7. By either erecting and or signing the agreement you consent to the above requirements, those as laid down specifically and accept any and all reasonable costs if the items are defective and or costs are incurred by Flintshire County Council.

8. Flintshire County Councils Street Lighting Department reserves the right to withdraw the approval for any noncompliance, operational requirements or any other reasonable requests. Under such applications it will be determined by the Operational North & Street Lighting Manager if a recharge shall be applied.

Integrated Impact Assessment (IIA) (including equality, environment, health, human rights, socio-economic Duty, United Nations Conventions the Rights of the Child and Welsh language

Name of Policy or Practice	Street Lighting Policy		
Responsible Officer (responsible for the Policy or Practice)	Darell Jones		
Service / Portfolio	Streetscene and Transportation	**Start Date of Assessment**	29th November 2023

Name of officer(s) (and partners) completing the IIA		
Name(s)	**Job Title(s)**	**Signature(s)**
Darell Jones	Operational North and Street Lighting Manager	
Katie Wilby	Chief Officer Streetscene and Transportation	
Barry Wilkinson	Highway Network Manager	

*Consider including only job titles when publishing

Document Version	**Revision Date**	**Briefly Describe the Changes**

IIA Approved by Responsible Officer / Portfolio / Service / Committee	
Date IIA Concluded	
Name	
Job Title	
Signature	

Introduction

This document is a multi-purpose tool ensuring the appropriate steps are taken to comply with the Public Sector Equality Duty (PSED) Equality Impact Assessment legislation and to demonstrate that we have shown due regard to the need to reduce inequalities of outcome resulting from socio-economic disadvantage when taking strategic decisions under the Socio-economic Duty. It also incorporates Welsh Language impacts, environmental and bio-diversity impacts, health impacts and United Nations Conventions Rights of a Child.

When we plan to introduce a new, or revise an existing, policy, strategy or practice, develop a new service, make changes or cuts to a service or make strategic decisions, we are required to consider if the decision would have a disproportionate impact on people sharing one or more protected characteristic or whether it could create inequalities of outcome around socio-economic disadvantage. Where this is likely to be the case, we must take appropriate action. The IIA process is not intended to prevent us doing things but to ensure we have considered the impact. It helps us focus on the actions we can take to remove and/or mitigate any disproportionate or discriminatory impact and introduce measures to advance equality of opportunity.

To comply with the PSED General Duty and Socio-economic Duty, we must have 'due regard' (or consciously consider the need) to: eliminate discrimination, advance equality of opportunity and foster good relations and to the need to reduce the inequalities of outcome resulting from socio-economic disadvantage. The greater the relevance and potential impact, the higher the regard required by the duty. The General Duty will be more relevant to some functions than others and they may also be more relevant to some protected characteristics than others. Our duty must be exercised with rigour, an open mind and considered at a time when it can make a difference to our decisions. Policies with high relevance, such as strategic budgetary decisions, grant-making programmes, changes to service delivery (including withdrawal or reorganisation of services), and recruitment or pay policies should always be subject to an assessment for impact. For further guidance see EHRC Assessing Impact Guidance. Our duty to comply with this legislation cannot be delegated.

This form should demonstrate the steps taken to carry out the assessment including relevant engagement/consultation, the information taken into account, the results of the assessment and any decisions taken in relation to those results. The IIA should be published where it shows a substantial (or likely) impact on our ability to meet the PSED.

Benefits of undertaking an IIA:

- Gain a better understanding of those who may be impacted by the policy or practice
- Better meet differing needs and become more accessible and inclusive
- Enable planning for success – identifies potential pitfalls and unintended consequences before any damage is done
- Enable improved planning that will make decisions proactive rather than reactive, avoid having to reverse decisions which could have cost and reputational implications
- Demonstrate decisions are thought through and have taken into account the views of those affected
- Enable us to manage expectations by explaining the limitations within which we are working (e.g. budget)
- Help avoid risks and improve outcomes for individuals
- Remove inappropriate or harmful practices and eliminate institutional discrimination

- Ensure we put Welsh and English Language on an equal footing. and that decisions are made that safeguard and promote the use of the Welsh language
- Improve and protect health, maximising health benefits and reducing health risks
- Be more open and transparent
- Use our resources more effectively

Whilst this document may seem lengthy, as well as containing the necessary steps in the process, it also contains guidance notes in the key areas to assist you in undertaking the IIA. Additional links to further information are also included for assistance. Further information can be found on NHS/ WLGA PSED/ EIA here.
The Welsh Government[1] guidance states that:
Impact assessment prompts and guides us to gather, and if necessary, seek evidence so as to improve the development of a policy or delivery plan, or inform a change of direction in policy or delivery. It is a methodology to help in the development and implementation of policy, rather than templates with tick boxes and checklists.

Integrated Impact Assessment Steps

Step 1 - Identify the Main Aims and Objectives of the Policy or Practice
Step 2 - Data, Engagement and Assessing the Impact
Step 3 - Procurement and Partnerships
Step 4 - Dealing with Adverse or Unlawful Impact and Strengthening the Policy or Practice
Step 5 - Decision to Proceed
Step 6 - Actions and Arrangements for Monitoring Outcomes and Reviewing Data
Step 7 - Publishing the Integrated Impact Assessment

Important Note to Completing Officer(s):

It is important that the IIA is completed when the policy or practice is being developed so that the findings from the IIA can be used to influence and shape the policy or practice. It is recommended as a minimum, it is completed by a lead officer who is responsible for the policy or practice, a subject matter expert and a critical friend with at least one who has received formal IIA training. This document needs to be presented to the decision makers along with the draft policy or practice as part of the decision making process.

[1] Welsh Government Integrated Impact Assessment Guidance

Where you are developing a high level strategy or plan that does not contain sufficient detail to show how it will impact on individuals or groups (i.e. where there will be plans and actions sitting beneath the strategy that will determine this), you should still undertake the Impact Assessment. You may also need to complete additional IIA(s) on the plans and actions beneath the high level strategy. This will ensure you demonstrate that you have shown due regard to complying with the General Duty, the Public Sector Equality Duty, the Welsh Language Standards the Socio-economic Duty, the Human Rights Act, the United Nations Conventions, Rights of the Child.

If your policy or practice is as a result of a UK, Welsh Government or Local Authority wide directive, you should still assess the impact of this locally to identify any differential impact due to local difference.

You should consider whether other events, e.g. COVID-19, Brexit, Black Lives Matter, etc. have highlighted or exacerbated inequalities that need to be addressed as you work through the IIA.

STEP 1 – Identify the Main Aims and Objectives of the Policy or Practice

1. What is being assessed? *(Please double click on the relevant box(es) (X) and select 'checked' as appropriate)*

- ☒ New and revised policies, practices or procedures (which modify service delivery or employment practices)
- ☐ Service review or re-organisation proposals which affect the community and/or staff, e.g. early years provision, care, education
- ☐ Efficiency or saving proposals, e.g., resulting in a change in community facilities, activities, support or employment opportunities
- ☐ Setting budget allocations for new financial year and strategic financial planning
- ☐ Decisions affecting service users, employees or the wider community including (de)commissioning or revised services
- ☐ New project proposals affecting staff, communities or accessibility to the built environment, e.g. new construction work or adaptations to existing buildings, moving to on-line services, self-service, changing location
- ☐ Large Scale Public Events
- ☐ Local implementation of National Strategy/Plans/Legislation (refer to any national IIA and consider local impact)
- ☐ Strategic directive and intent, including those developed at Regional Partnership Boards and Public Service Boards which impact on a public bodies functions
- ☐ Medium to long term plans (for example, corporate plans, development plans, service delivery and improvement plans)
- ☐ Setting objectives (for example, well-being objectives, equality objectives, Welsh language strategy)
- ☐ Major procurement and commissioning decisions
- ☐ Decisions that affect the ability (including external partners) to offer Welsh language opportunities and services
- ☐ Other please explain in the box below:

2. What are the overall aims, objectives and intended outcomes of the policy or practice?

This Policy outlines the basic principles and standards applied to the maintenance, installation and adoption of Street Lighting, Illuminated and Electrical Street Furniture, setting out the aims of the authority with respect to maintenance and management regimes and the procedures put in place to achieve those aims.

The overall objective is to manage and maintain a safe, effective and efficient network that ensures the safety of all road users, pedestrians and cyclists.

The policy will apply to:

1. Flintshire County Council owned and maintained Carriageways, Highway, Footway, Open Spaces, Amenity, Streetscene and Transportation Electrical assets and Illuminated Lighting.

2. Flintshire County Council owned and maintained Illuminated and Electrical Street Furniture and associated equipment including CCTV, ticket machines etc.

3. Town and Community Council owned Lighting maintained by the County Council on their behalf and the relevant aspects of management and monitoring in accordance with the Highways Act 1980.

4. Outside of scope where other stakeholder wish to erect on or over the adoptable highway network or Streetscene and transportation infrastructure.

The street lighting policies have been developed to support the aims and objectives of other County Council strategies and initiatives by recognising that street lighting and illuminated street furniture plays a major part in helping to reduce crime, improving driver behaviour, pedestrian's visibility distances and promoting a safer community and reducing the fear of crime. (Crime and Disorder Act 1998)

3. Who are the main consultative groups (stakeholders)?

Elected Members
North Wales Street Lighting Group
Clwydian Range and Dee Valley AONB

4. Is the policy related to, influenced by, or affected by other policies or areas of work (internal or external), e.g. strategic IIAs if this is an operational IIA and vice versa?

Towards Zero Waste https://gweddill.gov.wales/topics/environmentcountryside/epq/waste_recycling/zerowaste/?lang=en
Climate Change Strategy

STEP 2 - Data, Engagement and Assessing the Impact

When completing this section, you need to consider if you have sufficient information with which to complete your IIA, or whether you need to undertake a period of engagement/consultation before continuing. The legislation relating to the IIA process requires you to **engage and involve people who represent the interests of those who share one or more of the protected characteristics *and* with those who have an interest in the way you carry out your functions**. The socio economic duty also requires us to **take into account the voices of those in the community including those with lived experience of socio economic disadvantage**. You should undertake engagement with communities of

interest or communities of place to understand if they are more affected or disadvantaged by your proposals. This needs to be proportionate to the policy or practice being assessed. Remember that stakeholders can also include our own workforce as well as partner organisations.

Before carrying out particular engagement activities, you should first look to data from recent consultations, engagement and research. This could be on a recent related policy or recent assessments undertaken by colleagues or other sources, e.g., Is Wales Fairer?, North Wales Background Data Document, Info Base Cymru, WIMD. This can help to build confidence among groups and communities, who can see that what they have said is being acted on. If you have very little or no information from previous engagement that is relevant to this IIA, you should undertake some engagement work with your stakeholders and with relevant representative groups to ensure that you do not unwittingly overlook the needs of each protected group. It is seldom acceptable to state simply that a policy will universally benefit/disadvantage everyone, and therefore individuals will be affected equally whatever their characteristics. The analysis should be more robust than this, demonstrating consideration of all of the available evidence and addressing any gaps or disparities. Specific steps may be required to address an existing disadvantage or meet different needs.

The Gunning Principles, established from past court cases, can be helpful in ensuring we apply fairness in engagement and consultation:

Principle 1: Consultation must take place when the proposals are still at a formative stage. You must not have already made up your mind.
Principle 2: Sufficient reasons must be put forward to allow for intelligent consideration and response. Have people been given the information and opportunity to influence?
Principle 3: Adequate time must be given for consideration and response. Is the consultation long enough bearing in mind the circumstances?
Principle 4: The product of consultation must be conscientiously taken into account when finalising the decision.

5. **Have you complied with the duty to engage as described above and are you sufficiently informed to proceed?**

Yes ☒ No ☒ ***(please cross as appropriate*** X***)***

6. **If Yes, what engagement activities did you undertake and who with?**

Engagement has taken place with: NWSLG ANOB Various Developers and Designers Internal Colleagues Elected Members

7. **If No, you may wish to consider pausing at this point while you undertake (further) engagement activities which you can include in the action plan below.** Please incorporate any information obtained from this additional activity in the boxes in question 8.

Action	Dates	Timeframe	Lead Responsibility	Information added to IIA (✓)

8. What information do you hold about the impact on each of the following characteristic and statutory considerations / duties from your experience of current service delivery and recent engagement or consultation? Include any additional relevant data; research and performance management information; surveys; Government, professional body or organisation studies; Census data; Is Wales Fairer? (EHRC[2] data); complaints/compliments; service user data and feedback; inspections/ audits; socio-economic data including WIMD[3] data. You may wish to include sub-headings showing where each element of your data has come from, e.g. national data, local data, organisation data, general or specific engagement exercises, etc.

Consider any positive or negative impact including trends in data, geography (urban or rural issues), demography, access issues, barriers, etc. Also include any areas where there are inequalities of outcome resulting from socio-economic disadvantage or other relevant issues identified by communities of interest or communities of place (i.e. where stakeholders, service users, staff, representative bodies, etc. are grouped together because of specific characteristics or where they live) and any issues identified for people living in less favourable social and/or economic circumstances.

Prompts for Equality Impact Asse

Equality and Human Rights

[2] Equality and Human Rights Commission

[3] Wales Index of Multiple Deprivation

Protected Characteristic /Group	Relevant Data	Positive and / or Negative Impact	Prompts (not an exhaustive list)
Age	The policy ensures that lighting and electrical infrastructure is designed and maintained to accommodate the needs of all age groups, considering factors such as visibility, safety, and accessibility. Special attention has been given to areas frequented by older individuals to enhance their sense of security during night time hours.	Positive	Older People Children Young People Working Age People Young Families Demographics NB: Where children / young people are affected complete the Childrens Rights Checklist United Nations Convention on the Rights of the Child (UNCRC) Caring responsibilities
Disability	The revised policy places a strong emphasis on accessibility, with considerations for people with disabilities, including those with visual impairments. This includes the strategic placement of lighting and the use of tactile indicators to enhance safety for all community members.	Positive	Mobility / Dexterity Blind or Visually impaired Deaf or Hearing impaired Mental Health Learning Disabilities Dementia Neurological difference / Autism Access to buildings/ facilities, induction loops, signage Access to communication methods, use of British Sign Language, Easy Read Carers Dietary requirements Other Long Term Health Conditions United Nations Convention on the Rights of Persons with Disabilities (UNCRPD)
Gender Reassignment	Gender considerations have been integrated into the lighting design to address the safety concerns of all genders. This includes well-lit pathways and public spaces, taking into account potential vulnerabilities that may be associated with gender-based safety issues.	Neutral	A person who proposes to, starts or has changed their gender identity Transgender

			Appropriate language use, i.e. gender neutral language, appropriate pronouns Gender neutral changing facilities and toilets confidentiality
Marriage & Civil Partnership	Adequate illumination is provided in areas frequented by this group to enhance their comfort and security during night time hours.	Neutral	Marital status Civil Partnership status Reference to partners and not assuming husband and wife relationships /terminology
Pregnancy & Maternity	Adequate illumination is provided in areas frequented by this group to enhance their comfort and security during night time hours.	Neutral	Pregnant mothers Those entitled to maternity and paternity leave Foster/Adoption Breastfeeding mothers Access to breast feeding facilities Dress codes/uniforms- do they accommodate pregnant women
Race	Cultural sensitivity has been a consideration in the revision process. Lighting designs are in place to avoid disproportionately affecting any particular racial or ethnic group negatively.	Neutral	Consider Ethnicity Nationality Gypsies / Travellers Language: interpreter provision Use of plain language Refugee / Asylum Seekers Migrants Positive Action Awareness events United Nations Convention on the Elimination of All Forms of Racial Discrimination (UNCERD)
Religion & Belief	Religion and Belief has been a consideration in the revision process. Lighting designs and guidance are in place to avoid disproportionately affecting any particular group negatively.	Neutral	Faith Communities Non Beliefs Dietary requirements Vegetarianism/Veganism Other philosophical beliefs Dress code/uniforms Religious festivals/activities Buildings – access to prayer room facilities

Sex	The lighting policy acknowledges the diverse makeup of the community, and efforts have been made to create an inclusive environment that is welcoming to individuals of all sexual orientations and gender identities. Safety considerations are applied uniformly without discrimination.	Positive	Men / Women Gender Identity Toilet facilities/baby changing Childcare Gender Pay Gap Sex workers United Nations Convention on the Elimination of All Forms of Discrimination against Women (UNCEDAW)
Sexual Orientation	The lighting policy acknowledges the diverse makeup of the community, and efforts have been made to create an inclusive environment that is welcoming to individuals of all sexual orientations and gender identities. Safety considerations are applied uniformly without discrimination.	Positive	Gay Lesbian Bi-sexual Heterosexual Terminology - Avoid making assumptions about a person's sexual orientation use gender-neutral terms such as partner(s). Confidentiality about sexuality Further resources available from Stonewall Cymru
Socio-economic Considerations- Reducing inequalities caused by socio-economic disadvantage	Improving the visual environment during dark hours by improved waste management and clearance improves local environmental quality which has been linked to improving individuals wellbeing and reducing crime The revised streetlighting policy aims to enhance the safety and security of residents and pedestrians by ensuring adequate illumination in key areas. We have conducted an analysis to identify vulnerable communities and have incorporated additional lighting measures in those areas to address potential safety concerns. The estimated cost of implementing the new streetlighting policy is X amount. However, the policy anticipates long-term economic benefits through energy savings and reduced maintenance costs associated with the adoption of energy-efficient technologies. This aligns with our commitment to sustainability and cost-effectiveness.	Positive	People living in less favourable social and economic circumstances than others in the same society. Disadvantage may be exacerbated by many factors of daily life, not just urban or rural boundaries. 'Intersectionality' issues - where identity compounds socio-economic status, e.g., single parents (often women), disabled people, some BAME groups. Examples include lower levels of good health, lower paid work, poorer educational attainment and an increased risk of being a victim of crime Further resources available from Welsh Government including

	The revised policy emphasizes the use of energy-efficient LED lighting and considers strategies to minimize light pollution. This aligns with our environmental goals, aiming to reduce the carbon footprint of street lighting while maintaining visibility and safety. We anticipate a significant decrease in energy consumption as a result of these measures. To address potential health effects, the policy includes guidelines on the intensity and direction of lighting to minimise disruption to residents' sleep patterns. Additionally, we are committed to monitoring and addressing any reported health concerns associated with the revised street lighting. The revised policy places a strong emphasis on accessibility, with considerations for people with disabilities, including those with visual impairments. This includes the strategic placement of lighting and the use of tactile indicators to enhance safety for all community members.		examples of inequalities of outcome caused by socio-economic disadvantage Inequalities of outcome.pdf
Human Rights	Right to Life: The revised policy, by enhancing visibility and safety through improved street lighting, contributes positively to the right to life. Adequate illumination in public spaces can help prevent accidents and criminal activities, safeguarding the well-being of residents. Right to Security and Privacy: While improved lighting enhances security, it is essential to strike a balance with the right to privacy. The policy incorporates measures to ensure that the increased illumination does not intrude on the privacy of residents and respects their right to a private life. Freedom of Movement: Adequate street lighting is essential for facilitating freedom of movement, especially during night time hours. The policy ensures that residents can move freely and safely within the community, supporting this fundamental human right.	Positive	See Human Rights Articles below. https://humanrightstracker.com/en/ on EHRC website

	Non-Discrimination: The policy is designed to be non-discriminatory, considering the needs of all residents regardless of their background, ensuring equal access to well-lit and safe public spaces. Efforts have been made to prevent any discriminatory impact on specific groups. Right to Participate in Cultural Life: The policy is crafted with consideration for the cultural life of the community. Lighting designs respect cultural and historical aspects, contributing positively to residents' ability to participate in cultural activities and events. Right to an Adequate Standard of Living: The policy may have economic implications related to the cost of implementation, but it also aims to contribute to an adequate standard of living. Energy-efficient measures can lead to cost savings for both the community and individuals, positively impacting their economic well-being. Right to Health: The policy addresses potential health concerns associated with lighting, ensuring that the intensity and direction of light are conducive to the well-being of residents. Monitoring mechanisms are in place to identify and mitigate any health-related issues. Right to an Effective Remedy: Residents have the right to an effective remedy in case of any negative impacts or grievances related to the street lighting policy. Transparent procedures for addressing complaints and providing remedies have been established. Right to Enjoyment of Public Spaces: The policy contributes to the right to enjoyment of public spaces by ensuring well-lit and safe environments. This enhances residents' ability to use and enjoy public spaces, fostering community engagement and social interaction.		

	Right to a Healthy Environment: The policy aligns with the right to a healthy environment by incorporating energy-efficient technologies and measures to minimise environmental impacts, contributing to the overall well-being of the community.		
Other (please state)	The revised policy is fully compliant with existing local, national, laws and regulations governing streetlighting. It adheres to environmental standards and lighting ordinances to ensure responsible and lawful implementation. The updated specification incorporates state-of-the-art LED technology, allowing for increased efficiency and reliability. Smart lighting features have also been integrated to enable remote monitoring and control, contributing to a more responsive and adaptive lighting system.	Positive	E.g., Modern Slavery, Safeguarding, Other COVID effects, Carers, Ex-offenders, Veterans, Care Leavers, Substance Abuse, Homeless
Welsh Language			
Welsh Language	All correspondence whether verbal, digital or physical can be communicated through the medium of Welsh	Positive	Ensuring equal status of both Welsh and English languages. Availability of and access to services, activities and information. Availability of Welsh speaking employees Technology Rights of individuals to ask for WL services. Impact on Welsh speaking communities, including: Positive / negative effects on opportunities to use the WL. Possible changes to number/percentage of Welsh speakers Migration Job opportunities / Staffing changes. Training needs and opportunities

			Availability of Welsh medium education. 20200921 DG S Policy making stand

Human Rights Act 1998 • Article 2 Right to life • Article 3 Freedom from torture and inhuman or degrading treatment • Article 4 Freedom from Slavery and forced labour • Article 5 Right to liberty and security • Article 6 Right to a fair trial • Article 7 No punishment without law	• Article 8 Respect for private life, family, home and correspondence • Article 9 Freedom of thought, belief and religion • Article 10 Freedom of expression • Article 11 Freedom of Assembly and association • Article 12 Right to marry and start a family • Article 13 Right to access effective remedy if rights are violated • Article 14 Protection from discrimination

Environment and Biodiversity			
	Relevant Data/Information	**Positive and /or negative impacts**	**Prompts** (not an exhaustive list)
Reducing greenhouse gas emissions	The effective management of street lighting and electrical assets plays a pivotal role in reducing greenhouse gas emissions through the strategic implementation of energy-efficient technologies and sustainable practices. The revised streetlighting policy incorporates the use of LED (Light Emitting Diode) technology, which is known for its significantly lower energy consumption compared to traditional lighting systems. By transitioning to LED lighting, the local authority aims to achieve a substantial reduction in electricity consumption for street lighting, directly contributing to a decrease in associated greenhouse gas emissions. Additionally, smart lighting controls and monitoring systems are integrated, allowing for precise management of lighting levels and faults based on real-time needs.	Positive	Will energy need be met through renewable sources? Will it reduce greenhouse gas emissions by reducing energy consumption and the need to travel? * Will it reduce ozone depleting emissions? Will it reduce emissions through retrofitting new technology? Will it reduce heat island effects on people and property?

Environment and Biodiversity			
	Relevant Data/Information	**Positive and /or negative impacts**	**Prompts** (not an exhaustive list)
	This intelligent management ensures that traffic signals effectively where employed, minimising unnecessary energy usage and further lowering the carbon footprint. The commitment to sustainable street lighting and electrical infrastructure not only enhances environmental stewardship but also aligns with broader initiatives to mitigate climate change and create a more eco-friendly urban infrastructure.		
Plan for future climate change	The revised street lighting policy strategically addresses future climate change by prioritising energy-efficient LED technology, smart lighting controls for adaptive energy use, and potential integration with renewable energy sources. Resilience measures are incorporated into infrastructure design and maintenance. The policy emphasises the adaptability to a changing climate and contributes to local climate resilience and sustainability goals.	Positive	Will it minimise flood risk from all sources of flooding? * Will it reduce property damage due to storm events/heavy rainfall by improving flood resistance and flood resilience? Will it reduce combined sewer overflow events? Will it encourage the re-use of resources? Will it encourage sustainable construction methods and procurement? Will it encourage water efficiency and drought resilience?
Pollution: air/, water/ soil/noise and vibration and emissions	The revised street lighting policy addresses light pollution by incorporating measures to minimise unnecessary brightness, glare and upward waste illumination. It promotes the use of G6 glare reduction technology, shielding and directed lighting fixtures to reduce upward light spill thus enhancing the visibility while mitigating the adverse effects on the night sky and surrounding environments. The policy encourages the implementation of new technologies and smart lighting controls that allow for adaptive part night	Positive	Will it reduce combined sewer overflow events? Will it improve air quality? * Will it reduce emissions of key pollutants? Will it reduce noise concerns and noise complaints? Will it reduce noise levels?

Environment and Biodiversity			
	Relevant Data/Information	**Positive and /or negative impacts**	**Prompts** (not an exhaustive list)
	applications, dimming and trimming during off-peak hours, further minimising light pollution and carbon output. Electric vehicle (EV) charging infrastructure considerations have been made, the policy supports sustainability by exploring opportunities to integrate EV charging stations within the streetlight infrastructure.		
Integrating biodiversity into decision making	The revised streetlighting policy integrates biodiversity considerations into decision-making by emphasising environmentally conscious practices. It includes measures such as the strategic placement of streetlights to minimise disruption to local ecosystems, especially in sensitive habitats. The policy encourages the use of lighting solutions that have reduced impact on nocturnal wildlife, helping to preserve natural behaviours. The decision-making process considers the potential ecological impacts, aiming to strike a balance between providing adequate lighting for safety and minimising disturbances to the surrounding flora and fauna. This approach reflects a commitment to sustainable urban development that harmonises with and contributes to the preservation of local biodiversity.	Positive	Have you considered the impacts and opportunities for action for biodiversity at early stages Are the impacts of procurement on biodiversity considered? Are products sourced sustainably? Have the wider benefits of improved biodiversity been considered, flood prevention, health and wellbeing, recreation? Can you link with other strategies and initiatives for biodiversity e.g. FCC Environment and Sustainability policy, FCC Section 6 Plan, FCC Urban tree and woodland plan?
Increasing the resilience of our natural environment?	The revised streetlighting policy enhances the natural environment's resilience through eco-friendly practices, including minimising light pollution and strategic fixture placement.	Positive	Does the proposal work with nature and consider the use of nature based solutions first and foremost? Does your proposal support the creation of new habitats (in

Environment and Biodiversity			
	Relevant Data/Information	**Positive and /or negative impacts**	**Prompts** (not an exhaustive list)
	Energy-efficient technologies like LED lighting further contribute to sustainability, collectively fostering a more resilient and sustainable ecosystem.		addition to any mitigation or compensation habitat) Does it contribute to the restoration of degraded habitats? Does it improve site management to improve nature value?
Improving understanding and raise awareness of the importance of biodiversity	Energy-efficient technologies like LED lighting further contribute to sustainability, collectively fostering a more resilient and sustainable ecosystem.	Neutral	Can your proposal promote understanding of biodiversity? Can the delivery of public goods and services such as social care, community health and recreation promote biodiversity? Can your proposal promote biodiversity with partners/beneficiaries
Encouraging resource efficiency (energy, water, materials and minerals)	Energy-efficient technologies like LED lighting further contribute to sustainability, collectively fostering a more resilient and sustainable environment.	Neutral	Will it reduce water consumption and improve water efficiency? Will it reduce energy consumption? *
Reducing waste production and increase recycling, recovery and re-use of waste	The revised streetlighting policy reduces waste production by prioritising durable technologies like LED lighting, extending product lifespan, and endorsing responsible disposal practices in line with WEEE guidelines. This approach minimises electronic waste generation and fosters sustainability in streetlight infrastructure.	Positive	Will it reduce consumption of materials and resources? Will it reduce household waste? Will it increase recycling, recovery and re-use? Will it reduce construction waste?
Reducing need to travel and promote sustainable forms of transport	Electric vehicle (EV) charging infrastructure considerations have been made, the policy supports sustainability by exploring opportunities to integrate EV charging stations within the streetlight infrastructure.	Positive	Will it reduce volumes of traffic? Will it encourage walking and cycling?* Will it increase proportion of journeys using modes other than the car?

Environment and Biodiversity			
	Relevant Data/Information	**Positive and /or negative impacts**	**Prompts** (not an exhaustive list)
	By reducing waste production by prioritising durable technologies like LED lighting, extending product lifespan etc this therefore reduce the need for spares transportation and maintenance visits.		
Improving the physical environment: housing, public space, access to and quality of green space	The revised streetlighting policy improves the physical environment by introducing light sources such as LED lighting for energy efficiency, strategically placing fixtures to enhance aesthetics, and integrating green elements for improved air quality and biodiversity.	Positive	Will it reduce litter? Will it enhance the quality of public realm? Will it improve access and mobility for all equality groups Will it improve open space? Will it improve landscape character? Will it minimise development on Greenfield sites
Protecting and enhancing the historic environment and architectural, archaeological and cultural heritage	No impact foreseen	Neutral	Will it protect heritage sites and cultural value? Will it protect strategic views? Will it protect listed buildings and their settings? Will it help preserve, enhance and record archaeological features and their settings?

Health			
Determinants of health	**Relevant data /information**	**Positive and /or negative impacts**	**Prompts** (not an exhaustive list) Guidance from  HIA_Tool_Kit_V2_WEB.pdf

Health			
Determinants of health	**Relevant data /information**	**Positive and /or negative impacts**	**Prompts** (not an exhaustive list) Guidance from  HIA_Tool_Kit_V2_WEB.pdf
Lifestyles	By promoting and complying to the updated policy and thus implementing of the maintenance and installation requirements, this will assist and support the natural environment and will be improved the visual aspect and illumination. This in turn will encourage residents and road users alike to travel and venture out more in the darker hours for social and physical activities. This not only improves the local environmental quality but also the fear of safety which has been linked to improving individuals wellbeing and reducing crime.	Positive	Diet Physical activity Use of alcohol, cigarettes, non-prescribed drugs Sexual activity Other risk-taking activity
Social and community influences on health	The overall result is a safer, more sustainable, and aesthetically pleasing urban environment that enhances the well-being and lifestyle of the community.	Positive	Family organisation and roles Citizen power and influence Social support and social networks Neighbourliness Sense of belonging Local pride Divisions in community Social isolation Peer pressure Community identity Language/Cultural and spiritual ethos Racism Other social exclusion

Health			
Determinants of health	**Relevant data /information**	**Positive and /or negative impacts**	**Prompts** (not an exhaustive list) Guidance from  HIA_Tool_Kit_V2_WEB.pdf
Mental well-being	The revised streetlighting policy positively affects mental well-being by creating well-lit and safer public spaces. Adequate lighting, especially during night time, promotes a sense of security and reduces feelings of vulnerability, contributing to overall peace of mind for residents and pedestrians. Additionally, the policy's consideration of minimising light pollution helps maintain a natural night environment, which can positively impact sleep patterns and circadian rhythms, thus supporting mental well-being. By fostering a safer and more harmonious urban environment, the street lighting policy contributes to the overall mental health and well-being of the community.	Positive	Does this proposal support sense of control? Does it enable participation in community and economic life? Does it impact on emotional wellbeing and resilience?
Living/environmental conditions affecting health	The revised street lighting policy positively affects mental well-being by creating well-lit and safer public spaces. Adequate lighting, especially during night time, promotes a sense of security and reduces feelings of vulnerability, contributing to overall peace of mind for residents and pedestrians. Additionally, the policy's consideration of minimising light pollution helps maintain a natural night environment, which can positively impact sleep patterns and circadian rhythms, thus supporting mental well-being. By fostering a safer and more harmonious urban environment, the streetlighting policy	Positive	Built environment Neighbourhood design Housing Indoor environment Noise Air and water quality Attractiveness of area Green space Community safety Smell/odour Waste disposal Road hazards Injury hazards Quality and safety of play areas

Health			
Determinants of health	**Relevant data /information**	**Positive and /or negative impacts**	**Prompts** (not an exhaustive list) Guidance from  HIA_Tool_Kit_V2_WEB.pdf
	contributes to the overall mental health and well-being of the community. The overall result is a safer, more sustainable, and aesthetically pleasing urban environment that enhances the well-being and lifestyle of the community.		
Economic conditions affecting health	Improved street lighting contributes to enhanced safety, potentially reducing crime rates and associated healthcare costs. Well-lit public spaces can promote community engagement and local economic activities, fostering a healthier and more vibrant environment. Additionally, the use of energy-efficient technologies in the policy may lead to cost savings for both the authority and residents, indirectly affecting economic well-being. By creating safer environments and supporting local economic vitality, the revised streetlighting policy can contribute positively to the economic influences on health within a community.	Positive	Unemployment Income Economic inactivity Type of employment Workplace conditions
Access and quality of services	Well-lit public spaces can promote community engagement and local economic activities, fostering a healthier and more vibrant environment. With the use of energy-efficient technologies leading to cost savings for both the authority and residents alike.	Positive	Medical services Other caring services Shops and commercial services Public amenities Transport including parking

Health			
Determinants of health	**Relevant data /information**	**Positive and /or negative impacts**	**Prompts** (not an exhaustive list) Guidance from  HIA_Tool_Kit_V2_WEB.pdf
	The revised street lighting policy also enhances access to services by improving safety and visibility, especially during non daylight hours. It contributes to higher service quality, particularly in emergency response, public transportation, and community amenities.		Education and training Information technology
Macr-economic, environmental and sustainability factors	The revised streetlighting policy has multifaceted influences on macro-economic, environmental, and sustainability factors. From a macro-economic perspective, the policy can stimulate local economic activity by creating safer and more inviting public spaces, potentially attracting businesses and encouraging community engagement. Environmentally, the integration of energy-efficient technologies, such as LED lighting, reduces energy consumption, lowering associated carbon emissions and contributing to environmental sustainability. In terms of broader sustainability, the policy supports long-term resource efficiency, enhances biodiversity through thoughtful urban planning, and promotes a resilient and eco-friendly infrastructure. Overall, the revised streetlighting policy contributes positively to macro-economic development, environmental conservation, and long-term sustainability goals.	Positive	Government policies Gross Domestic Product Economic development Biological diversity Climate

United Nations Conventions on the Rights of the child			
	Relevant data or information	**Positive and/or negative impacts**	Prompts (not exhaustive)
Relevant Article			Summary of conventions

There are four articles in the convention that are seen as special. They're known as the "General Principles" and they help to interpret all the other articles and play a fundamental role in realising all the rights in the Convention for all children. They are:	
Article 2	The Convention applies to every child without discrimination, whatever their ethnicity, sex, religion, language, abilities or any other status, whatever they think or say, whatever their family background
Article 3	(best interests of the child) The best interests of the child must be a top priority in all decisions and actions that affect children.
Article 6	(life, survival and development) Every child has the right to life. Governments must do all they can to ensure that children survive and develop to their full potential
Article 12	2 (respect for the views of the child) Every child has the right to express their views, feelings and wishes in all matters affecting them, and to have their views considered and taken seriously. This right applies at all times, for example during immigration proceedings, housing decisions or the child's day-to-day home life

9. Are there any data or information gaps and if so what are they and how do you intend to address them?

None

Note: If it is not possible to obtain this information now, you should include this in your action plan in Step 6 so that this information is available for future IIAs.

10. How does your proposal ensure that you are working in line with the requirements of the Welsh Language Standards (Welsh Language Measure (Wales) 2011), to ensure the Welsh language is not treated less favourably than the English language, and that every opportunity is taken to promote the Welsh language (beyond providing services bilingually) and increase opportunities to use and learn the language in the community?

All literature / information will be provided through the medium of Welsh as well as English when required or requested

11. **If this IIA is being updated from a previous version of a similar policy or practice, were the intended outcomes of the proposal last time achieved or were there other outcomes?** (Please provide details, for example, was the impact confined to the people you initially thought would be affected, or were other people affected and if so, how?)

N/A

12. **What is the cumulative impact of this proposal on different protected groups when considering other key decisions affecting these groups made by the organisation?** (You may need to discuss this with your Chief Officer or Cabinet Member to consider more widely if this proposal will affect certain groups more adversely because of other decisions the organisation is making, e.g., financial impact/poverty, withdrawal of multiple services and whether this is disadvantaging the same groups, e.g., disabled people, older people, single parents (who are mainly women), etc)

This policy and specifications will be available to all required parties with the documentation and information in easy read format to their needs and requirements.

Therefore the overall impact will be positive.

13. **How does this proposal meet with each of the 7 goals of the Well-being of Future Generations (Wales) Act 2015?**

For more information, please see: https://futuregenerations.wales/about-us/future-generations-act/

A Prosperous Wales:

The policy, through its emphasis on energy-efficient technologies, may contribute to economic prosperity by potentially reducing energy costs and stimulating economic activity in safer, well-lit public spaces.

A Resilient Wales: The policy's consideration of resilience in infrastructure design, maintenance, and community engagement aligns with the goal of building resilience within communities and supporting adaptability to changing conditions.

A Healthier Wales: Improved street lighting enhances safety, contributing to public health and well-being. Reduced light pollution also positively impacts sleep patterns, aligning with the goal of creating a healthier living environment.

A More Equal Wales: The policy aims to provide well-lit and safe public spaces for all residents, contributing to equality in access to essential services and promoting a sense of community inclusivity.

A Wales of Cohesive Communities: By promoting community engagement, aesthetic considerations, and safety in public spaces, the policy fosters a sense of community cohesion and contributes to the development of cohesive and vibrant communities.
A Wales of Vibrant Culture and Thriving Welsh Language: The policy, through its commitment to preserving cultural and historical aspects in lighting design, supports the goal of maintaining vibrant local cultures and heritage.

A Globally Responsible Wales: Energy-efficient technologies and sustainable practices in the policy contribute to global responsibility by reducing energy consumption, lowering carbon emissions, and promoting environmentally conscious urban planning.

14. How does this proposal meet with the 5 ways of working of the Well-being of Future Generations (Wales) Act 2015 ?

Integration: The policy demonstrates integration by considering various aspects such as energy efficiency, safety, engagement, and environmental impact. By aligning these factors, the policy contributes to a holistic and integrated approach to a sustainable street lighting and electrical infrastructure.

Long-Term Thinking: The emphasis on energy-efficient technologies, smart controls, and resilient infrastructure design reflects a commitment to long-term thinking. By considering the longevity and adaptability of streetlighting solutions, the policy aims to provide lasting benefits for future generations.

Prevention: Through strategies to minimize light pollution, optimize energy use, and enhance safety, the policy aligns with the principle of prevention. This involves addressing potential issues before they escalate, contributing to a more sustainable and preventative approach to planning and designing and illuminated infrastructure.

Collaboration: The policy promotes collaboration by engaging with the community, considering diverse perspectives, and potentially collaborating with other local stakeholders. Collaboration is key to effective and inclusive decision-making in the development and implementation of the street lighting policy.

Involvement: Community involvement is a central theme in the policy, as seen in efforts to engage residents in the decision-making process, gather feedback, and consider the specific needs and preferences of the local community. This aligns with the principle of involvement, ensuring that the policy reflects the aspirations of those it directly affects.

15. Describe any intended negative impact identified and explain why you believe this is justified (for example, on the grounds of advancing equality of opportunity or fostering good relations between those who share a protected characteristic and those who do not or because of an objective justification[1] or positive action[2])

N/A

Note[1]: Objective Justification - gives a defence for applying a policy, rule or practice that would otherwise be unlawful direct or indirect discrimination.To rely on the objective justification defence, the employer, service provider or other organisation must show that its policy or rule was for a good reason – that is 'a proportionate means of achieving a legitimate aim'. A **legitimate aim** is the reason behind the discrimination which must not be discriminatory in itself and must be a genuine or real reason, e.g., health, safety or welfare of individuals. If the aim is simply to reduce costs because it is cheaper to discriminate, this will not be legitimate. Consider if the importance of the aim outweighs any discriminatory effects of the unfavourable treatment and be sure that there are no alternative measures available that would meet the aim without too much difficulty (proportionate) and would avoid the discriminatory effect.

Note[2]: Positive Action - Where an employer takes specific steps to improve equality in the workplace to address any imbalance of opportunity, lessen a disadvantage or increase participation in a particular activity, for example, increasing the number of disabled people in senior roles where they are under-represented by targeting specific groups with job adverts or offering training to help create opportunities for certain groups. The public sector is expected to consider the use of positive action to help them comply with the Public Sector Equality Duty.

16. Could any of the negative impacts identified amount to unlawful discrimination but are perceived to be unavoidable (e.g., reduction in funding)?

Yes ☐ No ☒ Not Sure ☐ *(Please double click on the relevant box (X) and select 'checked' as appropriate)*

17. If you answered Yes or Not Sure to question 15, please state below, which protected group(s) this applies to and explain why (including likely impact or effects of this proposed change)

18. If you answered No to question 15, are there any barriers identified which amount to a differential impact for certain groups and what are they?

N/A

STEP 3 - Procurement and Partnerships

The Public Sector Equality Duty (PSED) requires all public authorities to consider the needs of protected characteristics when designing and delivering public services, including where this is done in partnership with other organisations or through procurement of services. The Welsh Language Standards also require all public authorities to consider the effects of any policy decision, or change in service delivery, on the Welsh language, which includes any work done in partnership or by third parties. We must also ensure we consider the Socio-economic Duty when planning major procurement and commissioning decisions to consider how such arrangements can reduce inequalities of outcome caused by socio-economic disadvantage.

When procuring works, goods or services from other organisations (on the basis of a relevant agreement), we must have due regard to whether it would be appropriate :

- for the award criteria for that contract to include considerations to help meet the General Duty (to eliminate discrimination, promote equality of opportunity and foster good relations);
- to stipulate conditions relating to the performance of the contract to help meet the three aims of the General Duty.

This only applies to contractual arrangements that are "relevant agreements" which means either the award of a 'public contract' or the conclusion of a 'framework agreement', both of which are regulated by the Public Sector Directive (Directive 2004/18/EC) which regulates the specified EU thresholds. Further information can be found here.

We must consider how such arrangements can improve equal opportunities and reduce inequalities of outcome due to protected characteristics and caused by socio-economic disadvantage, particularly on major procurement and commissioning decisions. The PSED applies to the work that private sector organisations undertake when delivering a public function on our behalf. We therefore need to ensure that those organisations exercise those functions by ensuring our procurement and monitoring of those services complies with the General Duty under Section 149 of the Equality Act 2010. In the same way, the Welsh Language Standards applies to any work undertaken on behalf of, and in the name of, public bodies that are themselves subject to the Standards, and so consideration should be given to how these requirements are monitored and communicated through the procurement documents. The Socio Economic Duty does not pass to a third party through procurement, commissioning or outsourcing. Therefore when we work in partnership with bodies not covered by the Socio Economic Duty, the duty only applies to us as the relevant public body.

19 Is this policy or practice to be carried out wholly or partly by contractors or in partnership with another organisation(s)?

Yes ☐ No ☒ *(Please double click on the relevant box (X) and select 'checked' as appropriate)*

If No, please proceed to Step 4

20. If Yes, what steps will you take to comply with the General Equality Duty, Human Rights and Welsh Language Legislation and the Socio-Economic Duty in regard to procurement and/or partnerships? Think about :

Procurement

- Setting out clear equality expectations in Tendering and Specification documentation, showing how promotion of equality may be built into individual procurement projects
- On what you based your decisions in the award process, including consideration of ethnical employment and supply chain code of practice
- Ensure that contract clauses cover the Equality Act 2010 (Statutory Duties) (Wales) Regulations 2011 and socio-economic requirements as well as Welsh Language Duties (remember that any duties from the Welsh Language Measure 2011 and Welsh Language Standards are also applicable to services provided on your behalf under contract by external bodies).
- Performance and Monitoring measures are included to monitor compliance, managing and enforcing contracts

Partnerships

Be clear about who is responsible for :

- Equality Monitoring relevant data
- Equality Impact Assessments
- Delivering the actions from the IIA
- Ensuring that equality, human rights and Welsh Language legislation is complied with by all partners
- Demonstrating due regard to the Public Sector Equality Duty and the Socio-Economic duty

STEP 4 - Dealing with Adverse or Unlawful Impact and Strengthening the Policy or Practice

21. **When considering proportionality, does the policy or practice have a significantly positive or negative impact or create inequalities of outcome resulting from socio-economic disadvantage?**
(Please give brief details)

Significantly positive impact	Significantly negative impact
N/A	N/A

22. **It is important that you record the mitigating actions you will take in developing your final policy/practice draft. Record here what measures or changes you will introduce to the policy or practice in the final draft which could reduce or remove any unlawful or negative impact or disadvantage and/or improve equality of opportunity/introduce positive change; or reduce inequalities of outcome resulting from socio-economic disadvantage?** (This could also inform the Action Plan in Q30)

Unlawful or Negative Impact Identified	Mitigation / Positive Actions Taken in the Policy/Practice	Completed (✓)

23. Will these measures remove any unlawful impact or disadvantage?

Yes ☐ No ☐ *(Please double click on the relevant box (X) and select 'checked' as appropriate)*

24. If No, what actions could you take to achieve the same goal by an alternative means?

N/A

25. What measures or changes in the following important legislative areas have you included to strengthen or change the policy/practice:

a) to foster good relations and advance equality of opportunity as covered by the General Duty in the Equality Act 2010;
b) to reduce inequalities of outcome as a result of socio-economic disadvantage;
c) to increase opportunities to use the Welsh language and in treating the Welsh language no less favourably than the English language as set out in the Welsh Language (Wales) Measure 2011 and reduce or prevent any adverse effects that the policy/practice may have on the Welsh language?

a) Fostering Good Relations and Advancing Equality of Opportunity:

The policy incorporates measures to ensure that street lighting practices foster good relations and advance equality of opportunity. This includes the consideration of lighting designs that are inclusive and accessible to all members of the community, irrespective of age, gender, disability, or other protected characteristics. Community engagement strategies are employed to gather diverse perspectives and ensure that the policy is sensitive to the needs and preferences of different groups.

b) Reducing Inequalities of Outcome Due to Socio-Economic Disadvantage:

The policy addresses socio-economic disparities by promoting energy efficiency, which can result in cost savings for residents and the local authority. By strategically placing streetlights and optimizing lighting levels, the policy aims to create safer environments for all, reducing inequalities in safety and security that may be more pronounced in economically disadvantaged areas.
c) Increasing Opportunities to Use the Welsh Language and Treating Welsh Language Equitably:

The policy aligns with the Welsh Language (Wales) Measure 2011 by promoting bilingual communication in public spaces, including streetlighting information and signage. Efforts are made to increase opportunities to use the Welsh language, and the policy ensures equitable treatment of the Welsh language, avoiding any less favourable treatment compared to English. Community feedback and engagement processes are conducted in both languages to facilitate inclusive participation.

These measures collectively strengthen the policy's adherence to legislative requirements, promoting equality, addressing socio-economic disparities, and supporting the use of the Welsh language in alignment with relevant legislation.

26. Do you have enough information to make an informed judgement?

Yes ☒ No ☐ *(Please double click on the relevant box (X) and select 'checked' as appropriate)*

27. If you answered Yes, please justify:

28. If you answered No, what information do you require and what do you need to do to make a decision?
(Note: Should data collection be included in the action plan (Step 6)?)

[You may need to stop here until you have obtained the additional information]

STEP 5 - Decision to Proceed

29. Using the information you have gathered in Steps 1 – 4 above, please state on the table below whether you are able to proceed with the policy or practice and if so, on what basis?

(Please double click on the relevant box (X) and select 'checked' as appropriate)

Decision

☒ Yes	Continue with policy or practice in its current form
☐ Yes	Continue with policy or practice but with amendments for improvement or to remove any areas of adverse impact identified in Step 4
☐ Yes	Continue with the plan as any detrimental impact can be justified
☐ No	Do not continue with this policy or practice as it is not possible to address the adverse impact. Consider alternative ways of addressing the issues.

30. Are there any final recommendations in relation to the outcome of this Equality Impact Assessment?

STEP 6 - Actions and Arrangements for Monitoring Outcomes and Reviewing Data

The IIA process is an ongoing one that doesn't end when the policy/practice and IIA is agreed and implemented. There is a specific legal duty to monitor the impact of policies/practices on equality on an ongoing basis to identify if the outcomes have changed since you introduced or amended this new policy or practice. If you do not hold relevant data, then you should be taking steps to rectify this in your action plan. To review the EHRC guidance on data collection you can review their Measurement Framework.

31. Please outline below any actions identified in Steps 1-5 or any additional data collection that will help you monitor your policy/practice once implemented:

Action	Dates	Timeframe	Lead Responsibility	Add to Service Plan (✓)
KPI's for Street Lighting Standards (Internal)		Monthly	Darell Jones	
KPI's for Traffic Signals Repairs and Standards		Quarterly	Darell Jones	

32. Please outline below what arrangements you will make to monitor and review the ongoing impact of this policy or practice including timescales for when it should be formally reviewed:

Monitoring and Review arrangements (including where outcomes will be recorded)	Timeframe & Frequency	Lead Responsibility	Add to Service Plan (✓)

Monitor and Review of legislation amendments	As required	Darell Jones	

STEP 7 - Publishing the Integrated Impact Assessment

Please arrange for this completed IIA to be agreed by your Chief Officer and arrange for translation and publishing with a copy sent to Stephanie Aldridge: stephanie.aldridge@flintshire.gov.uk.

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Environment & Economy Overview & Scrutiny Committee

Date of Meeting	Tuesday 9 January 2024
Report Subject	Bailey Hill, Mold
Cabinet Member	Cabinet Member for Climate Change and Economy
Report Author	Chief Officer (Planning, Environment and Economy)
Type of Report	Operational

EXECUTIVE SUMMARY

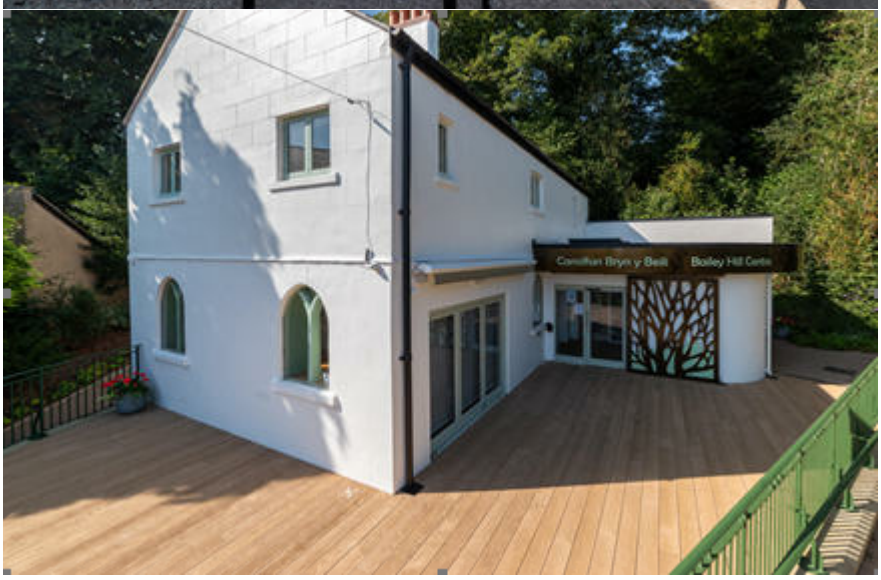
Bailey Hill in Mold is a Council-owned green space in the heart of Mold incorporated the remains of Mold Castle. Previously overgrown and under-used, the site has been restored to be a valuable community resource through a tripartite partnership between the Council, Mold Town Council, and the Friends of Bailey Hill. This report provides a summary of the project that has been undertaken.

RECOMMENDATIONS	
1	Members are asked to note the successful completion of development at Bailey Hill in Mold.

REPORT DETAILS

1.00	**Explaining the project at Bailey Hill, Mold**
	Background
1.01	The Bailey Hill in Mold incorporates the remains of a Norman motte and bailey castle, a public park, a custodian's cottage, and a former bowling green and playing area. The Council owns the site. The site had become very overgrown and unwelcoming, little-used by Mold residents and subject to anti-social behaviour. Most of the site is a Scheduled Ancient Monument.

1.02	Stakeholders in Mold had been championing Bailey Hill for some time as an underutilised asset in the town capable of playing a more positive role in the town centre as a recreation and cultural asset for local people.
1.03	As part of the Council's transformation programme, the concept of a tripartite partnership arrangement for Bailey Hill was agreed; bringing together the Town Council, County Council and Friends group to develop the site and better manage it. This partnership is embodied in a written but non-binding agreement between the parties.
	<u>The development of Bailey Hill</u>
1.04	The partnership agreed a major redevelopment proposal for the site which would restore its physical appearance, improve facilities for users and enable the site to better host events and activities. To deliver these aspirations, the partnership developed a series of funding bids which resulted in over £1.7m of funding being secured for the site. The funding included: Heritage Lottery Fund £1,138,688 Welsh Government £123,740 Landfill Tax £49,600 Cadwyn Clwyd £157,575 Mold Town Council £15,080 Mold Mayoral Charity £9,000 Friend of Bailey Hill £2,809 Flintshire County Council £225,000
1.05	The development work on Bailey Hill included: 1. The redevelopment of the Custodian's Cottage – retaining residential use upstairs and creating lettable community and interpretation space downstairs together with kitchen, tool store, accessible toilet, and office space. 2. Improving the entrance to Bailey Hill to create accessible routes, enable limited vehicle movements for events and improve the setting of the war memorial. 3. Improving the walking routes to the two main open spaces on the site. 4. Installing an electricity supply into the site to support events. 5. Replacing the play area. 6. Repairing the boundary wall. In addition, a programme of community engagement activities and events was supported to re-engage the people of Mold, especially schools, in their site.
1.06	The headline breakdown of costs for the project, as of the time of writing, include: Capital works £949,932 Fees £189,654 Staff £137,000 Activity costs £186,406 Play area £138,300 (due on site imminently) Boundary wall £100,000

1.07	The works on site were competitively procured with TG Williams appointed to undertake the works with Harrison Design Development from Mold appointed to manage the construction project. The Museums Officer from Aura managed the overall project including the complex funding package as well as providing expert advice on the sensitive archaeology of the site and liaising with CADW throughout delivery. Mold Town Council employed the project officer for Bailey Hill who co-ordinated the work of the different partners, recruited and supported volunteers, promoted the site and the activities, and developed an imaginative events programme and school engagement. The improvements to the boundary wall were delivered by the County Council Streetscene team. The replacement of the play area is currently being managed by Aura.
1.08	Work started on site in 2019 and was significantly delayed due to the Covid pandemic. The contractor TG Williams provided a high level of flexibility and responsiveness through the constraints that the pandemic brought. In addition, a number of important archaeological finds on the site, outlined below, also created significant delays and design changes. Except for the play area, all other construction works on site are complete.  
1.09	All works on the site have been subject to consent from CADW and have been closely monitored by archaeologists from the Clwyd Powys

Archaeological Trust. This resulted in a number of very interesting and unexpected discoveries:

1. Possible defensive wall and floor levels of a building were found at the base of the motte. This was dated by associated Twelfth / Thirteenth century pottery sherds. We hope to get funding for radiocarbon dating the charcoal content of the mortar. Large ash deposits indicate the building was likely to have been a kitchen range.
2. Elsewhere on site, a large defensive three-metre-thick wall was found, again probably Norman. Due to its size and thickness this is likely to be the outer defensive wall of the castle. Historically it was believed that a stone structure had been erected on the top of the motte but the rest of the site would have had wooden palisade defences and buildings. The large number of stone structures indicate that the Bailey Hill site played a far greater role in the history of the area than previously thought. Considerable time, effort and money had been spent to fortify the site.
3. Seven historic skeletons were found lying east-west (so possibly Christian) in the area developed for the outdoor stage. The skeletons are from both men and women and include a child. All remains have now been removed from site. Historical records mention skeletons being found in the past, but it was always believed that these were disarticulated and in a ditch or pit, having been dumped post battle. The skeletons have been sent to Durham University for analysis to identify their sex, height, health, and age at death. We are unsure of their historical date as there were no associated archaeological features / finds. Radiocarbon dating will hopefully tell us when they lived and further analysis may tell us their origin.

4. Other important finds include early Medieval arrowheads.

	
1.10	The interpretation for the site has been delayed to reflect the exciting archaeological finds and what they may mean in terms of our understanding of the history of Bailey Hill.
1.11	The Centre is open to the public on Thursday each week and is used, on a prebooked basis, by a variety of local community groups. It is also available as a base for the Friends group to use when they undertake their volunteer days.
1.12	The Friends of Bailey Hill (Ffrindiau Bryn y Beili) have played a significant role in improving the appearance of the site. They have undertaken a major planting programme throughout the park, in close liaison with the Council Streetscene team, have erected bird boxes and planters and undertaken general site improvement works above those that the Council has been able to manage. The group has also been an invaluable set of ears and ears on the ground and undertake much of the day-to-day liaison with the public. The volunteers from the group have attended the site most weeks with over 150 practical sessions now completed.  

	
1.13	In addition, Mold Town Council recruited a pool of volunteers who have done vital work in researching the history of Bailey Hill. Other volunteers have also helped to keep the Centre open, support events and deliver guided walks.
	Future arrangements
1.14	The tripartite arrangement remains in place and is now responsible for the ongoing management of the site. Flintshire County Council remains the landowner and is responsible for the day-to-day maintenance of the site as a whole. Mold Town Council operate the Centre on site and support volunteers and events on the site. The Friends of Bailey Hill are providing additional services to further enhance the appearance of the site, improve biodiversity and liaise with local people. A detailed management and maintenance plan is in place to define the roles of the three partners which is currently being refreshed.
1.15	The site has now been awarded the annual Green Flag award three times by the awarding body. It is a condition of the Lottery funding that this status is retained for seven consecutive years.
1.16	The site is now host to a weekly Men's Sheds project which supports men who might otherwise face isolation and loneliness. A number of youth organisations are also keen to use the site on a regular basis as an accessible and safe "wild" green space.
1.17	No further major projects are planned for Bailey Hill once the play area investment has been completed. The Friends will continue to improve the quality of the garden environment and biodiversity on site and the site will be marketed by the Town and County Councils as a resource for local people and visitors.

2.00	**RESOURCE IMPLICATIONS**
2.01	The Centre, even once the income from residential and community lettings has been considered, runs at a deficit each year and will always do so. At present, Mold Town Council have been bearing this cost. The tripartite partnership will need to review the operation of the Centre and more fairly distribute the operation and costs of the Centre between them in line with the original concept for the site.

2.02	The costs arising from the arrangement cannot be quantified at this stage but are likely to be sufficiently small as to be able to be absorbed within the Enterprise and Regeneration service budget.

3.00	**IMPACT ASSESSMENT AND RISK MANAGEMENT**
3.01	**Ways of Working (Sustainable Development) Principles Impact**

Long-term Prevention Integration Collaboration Involvement	This project was conceived in line with these principles. It has been a community-led project with close involvement from local stakeholders throughout. The project has been working towards long terms solutions to improving a problematic and underused urban site and creating a valued community resource.

Well-being Goals Impact

Prosperous Wales Resilient Wales Healthier Wales More equal Wales Cohesive Wales Vibrant Wales Globally responsible Wales	The site has the potential to play a role in supporting footfall in the town centre. It is a valuable resource for informal recreation in the town and now is well-used by local people. It is also a valuable education and cultural resource with most local schools having used it at least once. A number of groups use the site for well-being activities. The site is also being improved as a biodiversity resource in an urban area.

Risk management

Risk	Mitigation
Costs of operating the Centre	The tripartite relationship will look to minimise and fairly apportion costs between the partners.

4.00	**CONSULTATIONS REQUIRED/CARRIED OUT**
4.01	The Bailey Hill project was extensively consulted upon with local stakeholders including the schools in Mold.

5.00	**APPENDICES**
5.01	None.

6.00	LIST OF ACCESSIBLE BACKGROUND DOCUMENTS
6.01	None.

7.00	CONTACT OFFICER DETAILS
7.01	**Contact Officer:** Niall Waller Enterprise and Regeneration Manager **Telephone:** 01352 702137 **E-mail:** niall.waller@flintshire.gov.uk

8.00	GLOSSARY OF TERMS
	Bailey – an enclosed space within a castle CADW – The Welsh Government department charged with protecting and celebrating the Welsh built environment. Motte – an artificial mound forming part of the defences of a castle. Scheduled Ancient Monument – a designated site of national importance protected from unauthorised change.

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