

JOB DESCRIPTION	
Job Title:	Design Team - <ul style="list-style-type: none"> • Design Technician • Assistant Design Engineer • Design Engineer • Senior Design Engineer
Directorate:	Place and Sustainability
Service:	Project Delivery
Reports to:	Design Services Manager
Grade:	Varies depending on job role, qualifications, and experience: <ul style="list-style-type: none"> • Design Technician Scale 6 (£29269 - £31364) • Assistant Design Engineer S01-S02 (£32076 - £36648) • Design Engineer P1 (£38258 - £40958) • Senior Design Engineer P2 (£42970 - £45987)
Hours:	37 [Part Time] [Term Time]

JOB PURPOSE

To support the Group Manager and Design Service Manager - Design and Delivery and other managers within P&S in delivering the Council and Directorate’s objectives through joined-up service planning, community engagement and the flexible use of resources.

The team will work with wider teams within Project Delivery to progress local infrastructure projects with varied levels of difficulty, being the main point of contact, and centre of excellence on those projects which require design input.

The team will be responsible for developing infrastructure project designs in line with CDM 2015 requirements to meet the agreed objectives, whilst working to a defined scope, budget, and programme.

The Place and sustainability directorate has a flexible structure to cope with varying workload pressures and the post holder may be required to undertake work in support of other offices.

Career Progression Pathway – Design

Entry Level (Design Technician) with the opportunity to progress through to Senior Design Engineer should the candidate attain the required qualifications, technical, and practical experience. The following doesn’t apply to the yearly pay progression criteria that Cambridgeshire County Council has in place to reward performance and development.



CAMBRIDGESHIRE COUNTY COUNCIL

PERSON SPECIFICATION	
Job Title:	Design Technician
Directorate:	Place & Sustainability
Service:	Project Delivery
Reports to:	Design / Senior Design Engineer
Grade:	Scale 6
Hours:	37 [Part Time] [Term Time]

PRINCIPAL ACCOUNTABILITIES	
1.	<p>Communication and Customer Focus</p> <p>Support the wider design team in developing projects that best meet the needs of the local community by actively seeking input from local members, key stakeholders, potential users, and the local community, throughout the design of projects.</p> <p>Ensure project sponsors are kept informed of project progress and queries are dealt with sympathetically and within agreed response times.</p> <p>Capable of explaining technical design aspects to non-technical stakeholders.</p>
2.	<p>Project Delivery</p> <p>Assist in all aspects of the planning and design of local infrastructure projects (e.g., highways, bridges, rights of way, etc)</p> <p>Assist in ensuring projects take due regard of the needs of all users of the network, especially those who are vulnerable or have particular needs.</p> <p>Assist in liaison with colleagues across the directorate and the Council to ensure the service / projects are delivered in the most efficient, effective, and co-ordinated manner.</p> <p>Be the design lead on less complex infrastructure projects in agreement with your line manager.</p>
3.	<p>Partnership Working</p> <p>Assist with the engagement of key partners such as the District Councils, Department for Transport, Highways England, Network Rail, Environment Agency, Local Enterprise Partnership, Community Groups, and others as required, to deliver infrastructure projects that meet the Council's and partners' objectives.</p>

PRINCIPAL ACCOUNTABILITIES	
4.	<p>Financial, Programme and Risk Management</p> <p>Assist with the monitoring of expenditure against project budgets.</p> <p>Comply with all relevant Health and Safety legislation and best practice in the planning, design, and delivery of projects.</p> <p>Maintain project risk registers and comply with management processes.</p> <p>Be able to work to an agreed design programme to deliver work on time.</p>
5.	<p>Construction Design Management</p> <p>Proactive in keeping up to date with relevant Health & Safety regulations and how they apply to the design discipline.</p> <p>Be cognisant of how design choices may impact the outcome of projects in a construction phase.</p> <p>Comply with design commentary requirements justifying engineering/design choices.</p> <p>Support a continuous learning ethos amongst the team and take ownership of change control.</p>
6.	<p>Effective challenge</p> <p>Capable of detailing/communicating design choices and concepts, promoting their benefits and identifying the constraints. Able to defend design choices.</p> <p>Support a 'safe to challenge' culture, where design solutions are tested within the team.</p> <p>Be actively aware of the impact Principal Designer responsibility has on design capability and invite challenge on all aspects of design choices.</p> <p>Assist the team with continual improvement of our processes and procedures, effectively challenge the way we work and contribute to improved outcomes.</p>

Education, Qualifications & Training

Essential

- HNC in Civil Engineering or related subject, or equivalent NVQ/BTEC

Knowledge and Experience

Essential

- Computer literate including an understanding of spreadsheet and database packages, and computer aided design software.
- Good communication and interpersonal skills
- Previous experience designing varied highway infrastructure projects – local authority or consultant.
- Knowledge of traffic management.
- Knowledge of CDM 2015 requirements.
- Good letter writing and report writing skills.

Other

Essential

- Can visit offices and sites, when necessary, where public transport is limited.
- Can visit and inspect sites which may have difficult access.
- Be able to attend meetings out of hours when necessary.

Progression Milestones Required -	Essential/ Desirable
Completion of a Level 5 apprenticeship in Civil Engineering or equivalent experience through current job role and further learning to Level 4.	Essential
Evidence of continued personal & professional development since starting in the role at the County Council.	Essential
Attaining a relevant professional membership qualification e.g., EngTech.	Desirable

CAMBRIDGESHIRE COUNTY COUNCIL

PERSON SPECIFICATION	
Job Title:	Assistant Design Engineer
Directorate:	Place & Sustainability
Service:	Project Delivery
Reports to:	Design / Senior Design Engineer
Grade:	S01 – S02 (linked grades)
Hours:	37 [Part Time] [Term Time]

PRINCIPAL ACCOUNTABILITIES	
1.	<p>Communication and Customer Focus</p> <p>Support the wider design team in developing projects that best meet the needs of the local community by actively seeking input from local members, key stakeholders, potential users, and the local community, throughout the development and delivery of projects.</p> <p>Ensure project sponsors are kept informed of project progress and queries are dealt with sympathetically and within agreed response times.</p>
2.	<p>Project Delivery</p> <p>Plan and design local infrastructure projects (e.g., highways, rights of way, etc)</p> <p>Ensure projects take due regard to the needs of all users of the network, especially those who are vulnerable or have particular needs.</p> <p>Liaise with colleagues across the directorate and the Council to ensure the service / projects are delivered in the most efficient, effective, and co-ordinated manner.</p> <p>Be the design lead on low - medium complexity infrastructure projects in agreement with your line manager.</p>
3.	<p>Partnership Working</p> <p>Engage with key partners such as the District Councils, Department for Transport, Highways Agency, Network Rail, Environment Agency, Local Enterprise Partnership, Community Groups, and others as required, to deliver infrastructure projects that meet the Council's and partners' objectives.</p>

PRINCIPAL ACCOUNTABILITIES	
4.	<p>Financial, Programme and Risk Management</p> <p>Monitor and manage expenditure against project budgets.</p> <p>Comply with all relevant Health and Safety legislation and best practice in the planning, design, and delivery of projects.</p> <p>Maintain project risk registers and comply with management processes.</p> <p>Be able to work to an agreed design programme to deliver work on time.</p>
5.	<p>Construction Design Management (CDM)</p> <p>Proactive in keeping up to date with relevant Health & Safety regulations and how they apply to the design discipline. Overseeing / supporting Design Technician application of the Construction Design and Management Regulation with design.</p> <p>Understanding of how design choices will impact the outcome of projects in a construction phase. Capable of pre-empting the impact design choices will have on the construction phase and end users.</p> <p>Comply with design commentary requirements justifying engineering/design choices whilst optioneering and communicating the benefits and constraints of solutions in relation to design options, and their impact on CDM.</p> <p>Actively promote a continuous learning ethos amongst the team and take ownership of change control.</p>
6.	<p>Effective challenge</p> <p>Capable of detailing/communicating design choices and concepts, promoting their benefits and identifying the constraints. Able to defend design choices and use constructive challenge when assessing design choices of your peers.</p> <p>Actively promote a 'safe to challenge' culture, where design solutions are tested within the team. Take ownership of change control as a result of healthy challenge.</p> <p>Understanding of the impact Principal Designer responsibility has on design capability and invite challenge on all aspects of design choices.</p> <p>Proactively promote continual improvement of our processes and procedures, effectively challenge the way we work and contribute to improved outcomes. Lead new ways of working.</p>
7.	<p>Technical Understanding</p> <p>Keep up to date with changing guidance and standards, sharing new concepts with the team and promoting best practice.</p>

PRINCIPAL ACCOUNTABILITIES	
	<p>Monitor and record change control throughout all design packages.</p> <p>Able to diversify between a range of highway related design packages and seek to broaden exposure through ownership of multiple highway design disciplines.</p> <p>Take ownership of design choices and able to demonstrate best value solutions in terms of social, Environmental and Financial benefit.</p>

Education, Qualifications & Training

Essential

- HND in Civil Engineering or equivalent knowledge and experience gained in the work environment.

Desirable

- A relevant professional membership e.g., EngTech

Knowledge, Experience and Skills

Essential

- Experience in the design and construction of local infrastructure projects.
- Experience of working as part of a wider design team.
- Computer literate including an understanding of spreadsheet and database packages.
- Good communication and interpersonal skills including the ability to respond clearly and courteously, even in difficult situations.
- Be able to make timely decisions to react to urgent and emergency situations.
- Proficient AutoCAD user.
- Experience producing detailed construction drawings for tender.
- Experience undertaking the role of Designer under CDM 2015 and maintaining designers’ decision logs and designers risk assessments as required.
- Understanding of legislation, practices, programmes, and funding arrangements for local transport projects
- Understanding of specific legislation relating to highway design.
- Experience of managing budgets and working to an agreed programme.

Other

Essential

- Can visit offices and sites, when necessary, where public transport is limited.
- Can visit and inspect sites which may have difficult access.
- Be able to attend meetings out of hours when necessary.

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Progression Milestones Required -	Essential/ Desirable
Completion of a Level 6 degree apprenticeship in Civil Engineering or equivalent experience through current job role and further learning to Level 5.	Essential
Evidence of continued personal & professional development since starting in the role at the County Council.	Essential
Attaining a relevant professional membership qualification e.g., EngTech.	Desirable

CAMBRIDGESHIRE COUNTY COUNCIL

PERSON SPECIFICATION	
Job Title:	Design Engineer (P1) & Senior Design Engineer (P2)
Directorate:	Place and Sustainability
Service:	Project Delivery
Reports to:	Design Services Manager
Grade:	P1 – P2 (linked grades)
Hours:	37 [Part Time] [Term Time]

PRINCIPAL ACCOUNTABILITIES	
1	<p>Communication and Customer Focus</p> <p>Support the Principal Engineer in designing projects that best meet the needs of users and the local community by actively seeking input from local members, key stakeholders, potential users, and the local community, throughout the development and delivery of projects.</p> <p>Ensure the project sponsors are kept informed about progress on the delivery of projects.</p>
2	<p>Project Management & Planning</p> <p>Plan and design local infrastructure projects through the approved service provider, taking full account of design and health and safety matters.</p> <p>Prepare scheme designs, monitor progress and expenditure through regular meetings.</p> <p>Liaise with colleagues across the directorate and the Council to ensure the service / projects are delivered in the most efficient, effective, and co-ordinated manner.</p> <p>Lead multi-agency projects teams.</p> <p>Escalate serious problems and disputes, recommending appropriate action.</p> <p>Respond and provide advice to the public in relation to scheme progress and design.</p> <p>Represent the County Council at meetings, including public meetings.</p> <p>Monitor consultants and contractor’s performance and delivery of the design programme of local infrastructure projects.</p> <p>Consult and liaise with other statutory and local groups to achieve acceptable solutions for all.</p>

PRINCIPAL ACCOUNTABILITIES	
3	<p>Partnership Working</p> <p>Engage with key partners such as the District Councils, Department for Transport, Highways Agency, Network Rail, Environment Agency, Local Enterprise Partnership, Community Groups and others as required, to design infrastructure projects that meet the Council's and partners' objectives.</p> <p>Negotiate with stakeholders such as communities, businesses, landowners, public transport operators and Statutory Undertakers to secure the necessary inputs to the project under the direction of the Principal Engineer.</p> <p>Represent the Service on technical working groups as appropriate.</p>
4	<p>Financial, Programme, Contract and Risk Management</p> <p>Monitor and manage expenditure against project budgets.</p> <p>Feed financial information to the Principal Engineer.</p> <p>Maintain project risk registers and comply with management processes.</p> <p>Comply with all relevant Health and Safety legislation and best practice in the planning and design of projects.</p> <p>Identify and allocate the appropriate resources to design infrastructure projects.</p> <p>Be the design lead on medium complexity infrastructure projects in agreement with your line manager.</p>
5	<p>Construction Design Management (CDM)</p> <p>Take ownership of relevant Health & Safety regulations and how they apply to the design discipline. Be responsible for overseeing Design Technician and Assistant Design Engineer application of the Construction Design and Management Regulation within their design.</p> <p>Challenge design choices and explain how they will impact the outcome of projects in a construction phase. Able to pre-empt the impact design choices will have on the construction phase and end users. Assess the impact of design choices on construction operations and maintain a clear record and change log structure for the team.</p> <p>Oversee design commentary requirements justifying engineering/design choices whilst optioneering and communicating the benefits and constraints of solutions in relation to design options, and their impact on CDM.</p> <p>Ensure there is a continuous learning ethos amongst the team and review the use of change control process.</p>

PRINCIPAL ACCOUNTABILITIES	
6	<p>Effective challenge</p> <p>Able to delivery technical communications to a varying audience, communicating design choices and concepts, promoting their benefits, and identifying the constraints. Able to defend design choices and use constructive challenge when assessing design choices of your peers and public/member challenge.</p> <p>Ensure there is a ‘safe to challenge’ culture, where design solutions are tested within the team. Take ownership of programme change control as a result of healthy challenge.</p> <p>Oversee the team’s Principal Designer outcomes and responsibility during design. Invite challenge on all aspects of design choices and coordinate sign off for construction ready designs.</p> <p>Ensure the team drives continual improvement of our processes and procedures, effectively challenge the way we work and contribute to improved outcomes. Lead new ways of working.</p>
7	<p>Technical Understanding</p> <p>Keep up to date with changing guidance and standards, sharing new concepts with the team and promoting best practice. Lead on new initiatives through testing new concepts particularly when it comes to reducing carbon in our construction phase.</p> <p>Oversee the monitoring and record change control throughout all design packages.</p> <p>Able to diversify between a range of highway related design packages and seek to broaden exposure through ownership of multiple highway design disciplines. Seek growth areas for additional design capability and complexity.</p> <p>Review design choices and champion best value solutions in terms of social, Environmental and Financial benefit.</p>
8	<p>Low carbon by default</p> <p>Engage with partners to understand new concepts and low carbon products and solutions.</p> <p>Able to challenge design options and encourage alternative low carbon solutions taking into consideration a triple bottom line approach including social, environmental and financial benefit throughout the review process.</p> <p>Work in partnership with our supply chain to work up innovative solutions to design that reduce our carbon footprint both in construction phase and following implementation.</p>

Education, Qualifications & Training

Essential

- Degree in Civil Engineering or equivalent
- A relevant professional membership, e.g. MCIHT and working towards being incorporated engineer status e.g., IEng.

Knowledge and Experience

Essential

- Experience in the development, planning, and design of transport infrastructure and related projects.
- Experience in budget management (including local government finance), programme and risk management best practises.
- Experience in local government practices including dealing with locally elected politicians, the public and media.
- Working knowledge of Health and Safety law and CDM 2015.
- Experience of managing external consultants and contractors.
- Understanding of legislation, practices, programmes, and funding arrangements for transport infrastructure projects
- Practical experience in dealing and negotiating with consultants and contractors and other organisations.
- Extensive knowledge of technical and contractual requirements relating to scheme development, design, and construction
- Be able to respond in an emergency, to quickly analyse a situation and decide on a course of action without reference to senior colleagues.
- Capable of preparing reports and representing the Authority at public meetings, out of hours where necessary
- Good negotiation skills and the ability to develop effective working relationships with senior staff throughout the Authority and staff of external organisations including other Councils and Government agencies.
- Good organisational skills and a flexible approach in planning and promoting work to meet tight deadlines.
- Proficient AutoCAD user.
- Experience producing detailed construction drawings for tender.
- Experience undertaking the role of Designer under CDM 2015 and maintaining designers' decision logs and designers risk assessments as required.
- Understanding of legislation, practices, programmes, and funding arrangements for local transport projects
- Understanding of specific legislation relating to highway design.
- Experiencing in managing, mentoring, and developing less experienced team members.

Desirable

- Working knowledge of County Council Standing Orders and Financial Regulations/Practices
- Working knowledge of various highways and planning legislation, codes of practice, etc.
- Working knowledge of County Council Policies, Planning Framework and Transport Plan

Skills and Attributes

Essential

- Strong commitment to public services and local democracy
- Well-developed customer awareness and sensitivity in consulting and dealing with the public.
- Political sensitivity and the ability to manage conflicting priorities.
- Ability to plan, manage and prioritise workload to meet deadlines.
- Strong communications skills both written and verbal including persuading and influencing.
- Ability to work independently and as part of a team.
- Ability to work to deadlines.
- Good problem solving and decision-making skills.
- Excellent interpersonal skills and a robust attitude to driving progress.
- Preparation of committee papers
- Comprehensive IT skills
- Demonstration of a creative and flexible approach to work
- Knowledge and understanding of consultation/ approval/ planning processes for transport projects.

Other

Essential

- Can visit offices and sites, when necessary, where public transport is limited.
- Can visit and inspect sites which may have difficult access.
- Be able to attend meetings out of hours when necessary.

Progression Scheme Pathway

Design Technician - Assistant Design Engineer - Design Engineer – Senior Design Engineer

Grades: Design Technician S6 – P2 Senior Design Engineer

Design Technician Scale 6		
Criteria reference	Criteria description	Grade
DT1	Working towards or seeking to commence a Civil Engineering qualification. Demonstrates awareness of: <ul style="list-style-type: none"> - CDM 2015 Regs - Highway Design - Cost management - Risk management 	S6
DT2	Successfully completed first year of qualification. Demonstrates understanding of: <ul style="list-style-type: none"> - CDM 2015 Regs - Highway Design - Cost management - Risk management <p>*Experience must include independently designing several low value & low complexity highway improvement projects to an appropriate standard.</p>	S6
DT3	Successfully completed second year of qualification or equivalent Level 4 course. Demonstrates role specific experience of: <ul style="list-style-type: none"> - CDM 2015 Regs - Highway Design - Cost management - Risk management <p>*Experience must include independently designing a portfolio of low value medium complexity highway improvement projects.</p>	S6
<p><i>To progress to S01, criteria DT1-DT3 and ADE1 must be met entirely and working towards ADE2.</i></p>		

Assistant Design Engineer S01 – S02		
Criteria reference	Criteria description	Grade
ADE1	<p>Successfully completed third year of qualification or equivalent Level 5 course.</p> <p>Demonstrates the following attributes:</p> <ul style="list-style-type: none"> - Understanding of how to produce tender packs. - Design risk management and mitigation through design. - Records continual professional development. - Project Management understanding and experience. <p>*Demonstrates effective design risk management and categorisation.</p>	S01
ADE2	<p>Completed degree in Civil Engineering, or a relevant discipline, or relevant experience. Working toward appropriate professional accreditation.</p> <p>Demonstrates contribution to continual improvement of design processes and outcomes relating to three of the following:</p> <ul style="list-style-type: none"> - CDM 2015 Regs - Cost management - Risk management - Infrastructure design - Innovation & Value Optioneering <p>*Experience must include designing a programme of multiple small projects and leading a single complex project.</p>	S02
<p><i>To progress to P1, criteria DT1-ADE2 and DE1 must be met entirely and working towards DE2.</i></p>		

Design Engineer P1		
Criteria reference	Criteria description	Grade
DE1	<p>Completed degree in Civil Engineering, or a relevant discipline, or relevant experience. Achieved membership of an appropriate professional institution.</p> <p>Demonstrates detailed working understanding, knowledge, and experience* of all of the following:</p> <ul style="list-style-type: none"> - CDM 2015 Regs - Cost management - Risk management - Infrastructure design - Innovation & Value Optioneering <p>*Experience must include managing a programme of medium projects and leading the design of several complex projects.</p>	P1
<p><i>To progress to P2, criteria DE1 must be met entirely, as must DE2.</i></p>		
Senior Design Engineer P2		
DE2	<p>Gained IEng accreditation and working towards NEC4 Supervisor accreditation.</p> <p>Demonstrates the following attributes:</p> <ul style="list-style-type: none"> - Contributing to the development of others. - Sharing learning throughout Project Delivery - Able to adapt communication style. Coordinates customer/stakeholder/internal multi team engagement with successful outcomes. - Capable of producing complex reports and technical designs/documentation relating to design and construction concepts. 	P2